A Failure Story: Politics and Financial Liberalization in Turkey, Revisiting the Revolving Door Hypothesis

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Summary. — The risks and benefits of financial liberalization is a highly contentious issue in the current economic debate. This article focuses on Turkey's "lost decades" and tries to reveal the underlying factors behind the economic collapse in the country. Two elements will be analyzed: (a) the role of public sector together with the domestic banking sector in setting the stage for alternating financial crisis, and (b) the effect of close correlation between external debt and capital flight on the economy. This paper argues that there exists a contemporaneous bi-directional causality between external debt and capital flight in the Turkish economy. Exploration of this fact may have some important implications for economic policy modeling in Turkey's crisis-ridden economy.
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1. INTRODUCTION

Within the last two decades, the countries of the developing world have been experiencing an intense structural transformation encompassing their economic and social foundations at an unprecedented pace. The new economic paradigm emphasizes a complete liberalization and deregulation of both goods and capital markets based on the assumption that intrinsic efficiencies, fairness and self-regulating capacity of free markets inevitably generate the most optimal allocation of capital and resources on the global scale. In addition to economic outcomes, the liberalization of markets is also expected to bring about democratization and liberalization of political life in the course of this transition (Kleinberg & Bensabat, 2000; Nonneman, 1996; Sachs, Woo, & Parker, 1997).

As a result of these expectations, the economic programs implemented in the developing countries have been built upon a common theoretical framework and embody a number of standard policy instruments which are already well discussed in the literature (Bird, 1998; Calvo, Leiderman, & Reinhart, 1996; Rodrik, 1996). The countries that went through this liberalization process, as expected by their architects, shared common elements in terms of success achieved in the end. But, these common elements, in most cases, were not exactly as the initial projections outlined by the policy makers. In contrast to expectations, many developing countries that went through this so-called neoliberal experiment suffered from serious instabilities and accompanying crises in their economies for the last two decades. [1]

The current article proceeds from this observation and attempts to argue that the existence of structural deficiencies both from country-specific factors as well as from the nature of the uncontrolled liberalization programs led to the rise of a bi-directional relationship between debt burden and capital flight

in the Turkish economy. These factors have contributed to the economic collapse of the country by determining both the nature of the adjustment process and the subsequent economic performance within the last two decades. We will also try to analyze the background developments leading to the rise of this debt burden by focusing mostly on the financial sector developments following the domestic and external financial liberalization programs of the 1980s. This argument does not and should not, however, lead the reader to conclude that financial and in general capital market developments are the only factors responsible for the problems that have arisen over the last two decades. The clientalist state structure in Turkey is by no means limited with the state's distributional role from wage earners or other disadvantaged groups to a small group of *rentiers* in the economy. Not only because the main subject of the paper is to analyze the capital flight and external debt relationship but also because we believe that financial sector developments both in domestic and external markets appear as the key determinant leading to the debt trap in the Turkish public finance, will we develop most of the discussion along these lines.

The paper is organized as follows; Section 2, after giving a brief history of the liberalization experience of the country, analyzes the background developments leading to the rapid deterioration of public sector accounts and accumulation of external debt in the economy. The role of the financial sector in these developments is also examined in this section, while questioning the direct and indirect rent-distribution mechanisms between the state and the domestic banking sector at the expense of the society. Sections 3 and 4 develop the econometric model to analyze the bi-directional relationship between capital flight and external debt in the country and discuss their connection with the arguments of the first part of the paper. The final part summarizes the findings and derives conclusions for policy making.

2. LIBERALIZATION EXPERIENCE OF TURKEY IN THE 1980S [2]

The Turkish economy, starting from late 1950s to late 1970s, was characterized by import-substitution (ISI) where the import regime acquired quite a restrictive character over time. Meanwhile, quantitative controls on

trade gained momentum and overvalued exchange rates together with severe rationing on both foreign exchange and bank credit (the criteria of which was not publicly known) became the main features of the system.

Increasing dependence on imports of intermediate and final goods, deteriorating current account balance, negative interest rates, and political insolvency were the broad headlines of the last stage of the above system in late 1970s. One of the *unsurprising* features of the era was the fact that during ISI years, the accumulation process was highly dependent on policy and politics rather than markets. [3] Entrepreneurs became increasingly dependent on the state and bureaucracy and on the subsidies provided by the latter rather than exploiting the opportunities created by the market itself. This political and economic environment created vast opportunities for rent-seeking behavior among the business community as business people competed fiercely for the special set of incentives provided by the state (Balkan & Yeldan, 1998; Boratav, 1993; Onis & Riedel, 1993). The system, as a result, encouraged and generated serious moral hazard problems and rent-seeking behavior on a systematic basis in both public and private spheres.

Following the major balance of payments crisis in the late 1970s, under the direction of international financial community, Turkey tried to undertake a profound transformation in the philosophy of state structure mainly concerning its role in economic affairs. The new economic (and political) paradigm aimed at reducing the size of the public sector involvement in the real sector through its operations of State Economic Enterprises (SEE) as well as at reducing the degree of intervention in the organization of the market activities.

Hence, the year 1980 constituted a cornerstone in the modern economic history of Turkey. Following this major economic crisis, Turkey emerged as a test case for the newly implemented World Bank (WB)-International Monetary Fund (IMF) joint program involving crossconditionality (Kirkpatrick & Onis, 1991; Schick & Tonak, 1987). The program designed by these twin institutions aimed at stabilizing and liberalizing the closed, inward-oriented economic structure in Turkey and at shifting it to an outward-oriented path of development. The WB and IMF were committed to present the Turkish experience as a *model of success* to the rest of the less-developed countries (LDCs). [4]

The structural shift from ISI regime to a free market model was realized under a military dictatorship that during the years 1980–83 imposed strict restrictions over labor union rights and labor's bargaining power. Yet, even after the retransition to democracy in November 1983 considerable restrictions over labor's bargaining power continued to be held together with continuing ban on the political parties established before the 1980 take-over. [5]

As a part of this broad program, in the course of the 1980s, Turkey went through a step-by-step liberalization in its economy. Liberalization of the foreign trade regime, removal of exchange rate controls, adoption of special policies with generous incentives to attract foreign direct investment (FDI), liberalization of market interest rates to encourage private savings, privatization of SEEs, and shifting to income transfers through public spending instead of price mechanisms were some of the components of the new economic program (Onis, 1998, pp. 183–196). In the final stage of this program, the August of 1989 witnessed a complete transition to an extremely liberal capital account regime even by the standards of the industrial economies with highly developed financial markets at that time. [6] The main reason for this move, in retrospect, appears to be the growing need for external capital flows to finance public sector borrowing requirement.

In this respect, although the year 1980 constitutes the starting point for the Turkish neoliberal experience, August 1989—which marks the shift to full capital account liberalization—appears as the Achilles' heel in its trajectory. Since then, Turkey has been exposed to the instabilities, the accompanying problems, and, the risks of financial liberalization and deregulation. These difficulties are evident in the three major crises in the post-1990 era in contrast with the initial risk-free phase of the reforms in the early 1980s. Furthermore, after 1989, the sustainability of large trade and public deficits has become possible by the availability of highly volatile and reversible short-term international capital flows. [7]

In retrospect, there is a growing controversy among the economists familiar with the Turkish experience on the underlying reasons behind the dramatic gap between the expected gains from market led outward-oriented growth path and the depressing results that have been achieved so far (Cizre-Sakallioglu & Yeldan, 2000, pp. 483–487). The point of departure is whether this "disappointing performance" occurred due to (a) domestic policy failures and accompanying deviations from the structural adjustment programs, (b) inherent difficulties with the neoliberal adjustment model, or at least in the Turkish setting (Boratav, Turel, & Yeldan, 1996, p. 391) or (c) timing and sequencing mistakes during the implementation of the policy objectives (along the lines of, e.g., Griffith-Jones, 2001; McKinnon, 1982). The last two arguments originate from the premise that the developing countries share common structural problems in their institutional settings and policies that are designed to liberalize the economy may also produce "frictions, inequalities, uncertainties, discontinuities and an unbalanced-distorted economic structure at the outset" (Cizre-Sakallioglu & Yeldan, 2000, p. 482).

In contrast to expectations, the reforms were not accompanied by any change in the financial behavior of the corporations and did not lead, for instance, to a decrease in investment costs (Akyuz, 1990). The government continued to keep its control over the economy through a combination of fiscal and price adjustment mechanisms. The real rate of interest jumped up to three-digit levels in the course of 1990s, while domestic asset markets became increasingly volatile and unstable as a result of sudden changes in speculative capital flows. The weak and fragile nature of the Turkish economy, in the end, contributed to the rise of three serious crises in 1994, 1998–99, and 2000–01 each of which was followed by a complete collapse of the economy and could (partly) be stabilized only after the IMF intervention and the accompanying "rescue packages."

The collapse of public disposable income in this period inevitably led to a public sector overborrowing syndrome. The state has become a powerless actor, lost in a vicious cycle generated by the widening public debt. The interest payments on public debt (most of which is in the form of short-term liabilities) could only be financed through new borrowing once again from short-term sources. Continuous flow of short-term funds, on the other hand, could only be made possible by offering higher and higher interest rates, which further increased the interest burden on the budget. In the face of this growing debt trap which resulted from high public expenditures and fiscal policy mismanagement (and rent-seeking behavior), the capital account liberalization of 1989 provided the successive governments with a deadly tool to finance their borrowing

requirements, namely, short-term capital inflows (Atiyas, 1995; Ersel, 1996; Tukel, 1997, p. 27).

As the foreign debt reached its limits in the course of 1980s, the public sector turned to the option of domestic borrowing. With its small and limited capital market and existing oligopolistic structure in it, this policy change resulted in very high interest rates on government bonds and treasury bills while enabling the financial sector to strengthen its hegemony over the real sector of the economy (Yeldan, 2001, pp. 144–155). Following 1989, in contrast to expectations, the share of private sector securities in total financial assets fell while the share of public sector securities and treasury bills increased. Government securities became the most important part of the banks' portfolios in the market. In 1993, 1997 and 2001, 85%, 95% and 90% of secondary market transactions belonged to the public sector, respectively (SPK, 2002). The natural outcome of these developments was a death trap for the public finance. The need for high interest rates to avoid the threat of capital flight and to ensure a continuous flow of short-term resources to finance the growing public expenditures led to further increases in real interest rates. The high public borrowing requirement together with the overvalued Turkish Lira (TL) and deteriorating current account balance further triggered instability in exchange and interest rates (Boratav et al., 1996). The size of the debt trap can be seen in Figure 1. The share of total public sector borrowing requirement (PSBR) reached 16.4% while the share of interest payments in the consolidated budget increased to 23% of GNP by the year 2001 from around 4.7% and 0.5% in 1975, respectively. [8] In search of the underlying reasons of this sudden rise in the PSBR and the interest burden on the budget, 1989 once more appears as the critical turning point in the Turkish trajectory. Throughout this period, the banking sector and other financial institutions have become the leading forces behind the capital manipulating the economy (Akyuz & Boratav, 2003; Boratav & Yeldan, 2002).

In this period, the share of domestic debt in GNP increased by almost 274% from around 18.2% in 1989 to 68% in 2001. For the same period, on the other hand, the public external debt to GNP ratio increased by only 30%, from 44.8% to 58.6%. But, this relative decline in foreign public debt with respect to domestic debt resulted mainly from the substitution of the foreign with the domestic resources. In other words, as the ability of the Turkish government to have access to long-term borrowing sources reached its limits, the government chose the option of financing its debt liabilities and the growing public deficit through short-term speculative financial flows (in a kind of Ponzi game) and short-term borrowing from domestic financial markets by selling treasury bills whose maturity were less than one year in most cases. Despite the relative decrease in the external debt, the share of short-term external debt to GNP ratio increased by almost 103% since 1989. Hence the increase in domestic debt in the aftermath of the financial deregulation was also accompanied by a sharp rise in short-term borrowing by the state.

As a result, the main source of increase in the external debt during the course of 1990s has been the credits opened to private Turkish banks. The above change in public policy gave rise to an interesting development in the
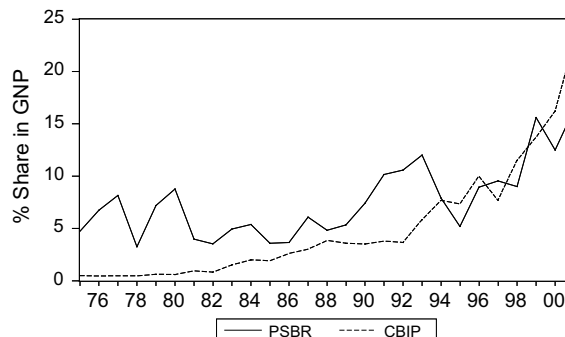

Figure 1. *Public sector borrowing requirement (PSBR) and consolidated budget interest payments (CBIP), 1975–2001. Source: State Planning Organization (2002).*

Turkish economy where private banks started to act as intermediaries to provide the public sector with the needed funds for its skyrocketing borrowing requirement. Therefore, although after 1989 the major burden of external debt was on the private sector and the level of external new borrowing was almost stagnant for the public sector, the main actor behind this growing external debt was again the public sector. Private market players have become simple arbitragers who borrow in the international markets at low interest rates and lend it to the government at record levels. One expected result of this vicious cycle with such high interest rates has been the destruction of the real sector of the economy. Firms directed their resources from fixed investment in real sectors to financial arbitrage gains via the treasury bills. This is visible in the ratio of financial revenues to net profit before tax (of top 500 manufacturing firms) that has increased from around 24% in 1985 to 219% in 1999 (Yeldan, 2001, p. 156).

The growing interest burden on the consolidated budget has been tried to be covered through investment cuts with negative effects on growth rates and through reducing current expenditures most of which were personnel expenditures (Boratav & Yeldan, 2000; Ozmucur, 1996). The share of current expenditures in the consolidated budget decreased from around 52% in 1975 to 25% in 2001 while the share of investment expenditures dropped from 20% to 5% for the same period.

Short-term measures resulted from myopia on the part of the politicians and the nature of the IMF programs—that do not consider long-term development perspectives but short-term solvency-created negative repercussions whose results were to be felt only with the passage of time. In this respect, there were two developments leading to future crisis. First, the policy of keeping interest rates high to encourage short-term capital inflows resulted in a rapid build up of domestic debt with a growing burden on the budget in the form of high interest payments. (The share of interest expenditures in the consolidated budget increased from 3% in 1975 to 51%, 47% of which was on domestic debt in 2001.) Second, the IMF-guided changes in the banking sector regulations, in particular the introduction of full state insurance for deposit accounts created serious moral hazard problems with rent-seeking behavior (Akyuz & Boratav, 2003; Kumcu, 1997; OECD, 2001, p. 18). [9]

Prior to 1989, capital movements were mostly endogenously determined within the economy. During the 1990s, following the liberalization of capital account, capital in- and out-flows have gained an almost autonomous character (Boratav, 2001). The growth of the external debt stock has gained a momentum independent of the current account. Hence we observe a growing disparity between the capital inflows and current account deficit in the country. The external debt has been growing independent of the current account deficit and, as will be discussed in detail in the remaining part of the paper, is being transferred to finance capital flight out of the country. The cumulative external debt stock has increased by $112 billions between 1974–2000 in current dollars whereas the current account deficit only amounted to $44.2 billions for the same period. The increase in the private external debt has been radical, 3400% increase during 1989–2000, or in other terms an increase from around $795 million to $27,828 million. The increase in public (and publicly guaranteed) external debt has been more moderate, 58% increase for the same period from around $35 billion to $55 billion. Therefore, as we just stated above, an important portion of the external debt has been realized by domestic banks with an underlying motivation to gain from arbitrage through borrowing abroad and lending to the Treasury at very high interest rates. The net gain from government debt instruments reached 40% in real terms during the course of 1990s (with an average of 36% in real prices during 1991–2000). The public finance of the country, as a result, became dependent on continuation of the short-term borrowing of the domestic banks from abroad to finance rollover of the public debt.

The growing debt burden on public sector accounts, in contrast to the commonly shared belief, did not result mainly from unsustainable government expenditures (such as on personnel, investment, education, health or social security) despite their doubtless contribution to the consequent problem. Not surprisingly, following the return to the multiparty democracy with the elections of 1987, *the losers* of the new economic model (namely workers, public servants, and agricultural workers) attempted to reorganize themselves to recover the losses they had incurred under the military dictatorship and under its following restrictions on the labor's bargaining power over the past years (Boratav et al., 1996, pp. 373–380; Onis, 1998,

pp. 495–508). In this respect during 1975–88, the share of current expenditures (most of which were personnel expenditures) in the consolidated budget decreased from almost 52% to 37%. Following the retransition to multiparty democracy, however, the years 1987–92 witnessed a rapid recovery period for *the losers* demonstrating itself with a sharp increase in the share of the current expenditures up to 56% by 1992.

Hence, it is true that a distinguishing feature of Turkey during late 1980s and early 1990s was the reemergence of a distributional conflict between the losers and the winners of the new system in the society. We argue, however, that the conflict did not last long and the share of current expenditures in the consolidated budget expenditures once again declined to around 25.3% (19% of which was on personnel expenditures) by 2001. Second, after the 1994 crisis, the public sector always had a primary surplus (though unwillingly) with an average of 3.4% of the GNP by 2001. During 1994–2001, total public sector revenues exceeded its noninterest expenditures by 18% on average.

Figure 2 shows that following the liberalization programs of the 1980s, primary balance of the public sector was not at unsustainable levels and had a *surplus* of around 1% of GNP during 1980–2001. But, when we include the interest payments into the calculations, we see that consolidated budget *deficit* to GNP ratio stands around 5% of GNP over the same period and hence pointing out the primary role of debt mismanagements and public policy mistakes in developing the current problems. Figure 3 supports these findings showing that the public

sector debt-trap started to evolve mostly because of the increasing interest burden despite decreasing public spending. The figures show that on average total revenues to total expenditures ratio (excluding interest payments) has been 104% during 1980–2001 and hence challenge the claim that it was persistent fiscal deficits, which caused the debt-overhang in Turkey. Yet, we need to point out that the continuation of the capital flight problem as well as the rising country risk premium (that is reflected in sovereign bond spreads and high domestic real interest rates) highlight growing concerns by the market participants over the sustainability of debt-overhang in Turkey. In this respect, high country risk premium and hence growing interest expenditures are not exogenous to the collapse of public finance of the country. As can be seen in Figure 1, despite the initial success in reducing PSBR during the 1980s, the 1990s turned out to be another lost decade. Past budget deficits (partly as a result of the return to populism in public expenditures during 1987–92) combined with the banking sector crises and subsequent bail-out costs, crony capitalism and rent-seeking behavior in public banks as well as in SEEs increased the negative effects of unregulated financial liberalization programs of the 1980s to unprecedented levels as has been proven with the subsequent financial crises throughout the 1990s.

Another point highlighting the importance of 1989 as a turning point is the growing disparity between consolidated budget balance and the primary balance. We observe the same behavior between total revenues to total expenditures
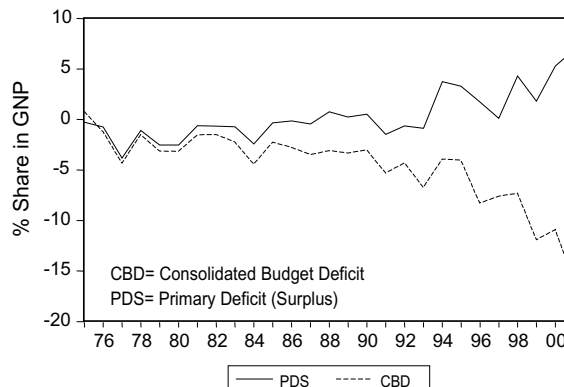

Figure 2. *Consolidated budget balance vs. primary balance of the public sector 1975–2001*. Source: State Planning Organization (2002). *Negative (positive) sign indicates deficit (surplus).*

TRTE= Total Revenues/Total Expenditures
TRTEI= Total Revenues/Total Expenditures (Excluding Interest Payments)
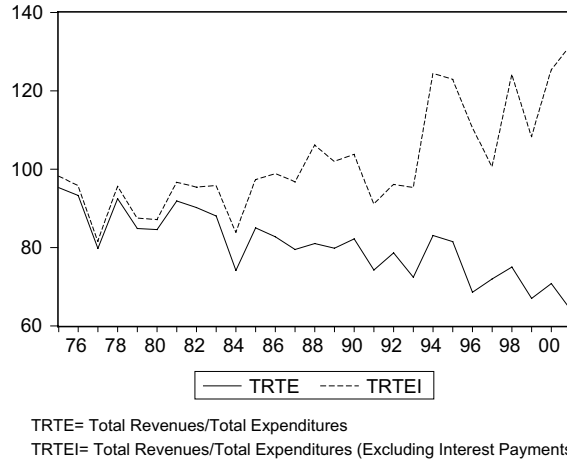
Figure 3. *Total balance of public sector revenue and expenditures 1975–2001. Source: State Planning Organization (2002).*

ratio with and without interest payment adjustment. That is why we mostly focus on the effects of the financing side of the public sector imbalances on key macro indicators as well as its endogenous development with continuous capital flight problem in the economy.

Among other factors leading to the debt-trap in the Turkish economy, we must mention another key factor generating this outcome; namely, the epidemic of nontransparency and nonaccountability in the Turkish public sphere that reveals itself in various forms such as the deteriorating performance of the banking sector and the financial system. As the crisis of public debt grew, outside pressures from the international financial institutions for tighter control over the quasi-fiscal activities of the state banks in developing budget transparency and accountability also gained momentum (OECD, 2001, pp. 17–18). The use of state banks (which still account for around 40% of the total assets in the sector) for political rent distribution in the form of distributing cheap credits on noneconomic grounds manifested itself in the accounts of large ''duty losses'' of these banks. The subsidized lending operations performed by the state banks on the behalf of the government generated a record level of duty losses, which reached around $25 billion accounting for almost 16% of GNP in 2001, and was one of the reasons leading to the deterioration of the consolidated budget deficit (OECD, 2001). Problems of subsidized lending suggest a possible direct linkage between the

external debt and capital flight in the economy. It is not hard to speculate that most of this $25 billion has already been transferred to some Swiss bank account while further exacerbating the borrowing needs of the public sector.

As the full state guarantee provision on bank deposits was the triggering factor on wide-range corruption and moral hazard problems in private banks, this time, after the December 6, 2000 crisis, under the guidance of IMF, the Treasury announced that it would provide a full guarantee on deposits and credits of Turkish banks. The guarantee covers all domestic banks including foreign branches of them. Although this provision was designed to give the private banks breathing space in the midst of the crisis, as was the case in 1994, it is likely to create further problems and lead to a future crises in the banking sector in the unregulated crony market environment of Turkey. The situation in Turkey reminds a careful reader in economics of the Latin American debt crisis of 1980s where considerable international pressures were brought upon those countries in question to socialize private external debts *ex-post*. [10] Interestingly, Turkey faced the same dilemma after these crises experiences. The result has been the take-over of 18 private banks by the state during 1997–2001 additional cost of which to the public sector has reached $15.5 billion. Out of this $15.5 billion, which consists of special issue government bonds transferred to these banks to cover their liabilities, only 5% recollection

could be realized from either their previous owners or distressed assets (Banking Regulation & Supervision Agency, 2001). The existence of such full state insurance reduces the political legitimacy of continuing to service the external debt given that the continuation of debt servicing itself is dependent on the availability of new credits from the international capital markets.

Furthermore, despite the urgent need for new yet continuous funds for public finance (instead of continuous rollover of public debt though new borrowings) the *inability* or *unwillingness* of policy makers to implement an efficient and fair tax scheme has further contributed to the macroeconomic disequilibrium of public finance of the country (Boratav & Yeldan, 2002; OECD, 2001, p. 17; Rodrik, 1990; Yeldan, 2001, pp. 121–125).

The share of principal and interest payments to total tax revenues increased from around 12% in 1980 to a record number of 236% of which 203% was on domestic debt in 2001. To service public debt, the central government channeled 103% of tax revenues—about 52% of its total expenditures—to interest payments in 2001 (which was only 4.2% in 1980). In other words, tax revenues have become insufficient to pay even for the interest payments alone.

In retrospect, Turkey's tax system has been characterized by two major problems: (a) the incapacity to tax effectively which results in inadequate overall tax revenues, in particular *vis-à-vis* the OECD standards (that inevitably results in a narrow tax base and high tax evasion), and (b) the highly unequal distribution of the tax burden mostly concentrated on low income groups (Onder, Turel, Somel, & Ekinci, 1993; Senatalar, Onder, Oyan, & Sevig, 1991; Yeldan, 1992). The share of indirect taxes in total tax revenues increased from 37.2% to 59.6% during 1980–2001.

In addition to widespread tax evasion resulting from lax tax administration, another striking fact about the post-liberalization era has been the relative decline in the burden of taxation on capital (Yeldan, 2001, p. 122). In this respect, the state's instrumental role in this income transfer mechanism is evident in the figures comparing taxes on capital incomes. [11] A comparison of the interest payments by the state and its tax earnings from corporate capital income reveals the nature of the relationship between the state and the corporate business and the use of fiscal debt management in this dual relationship.

The contribution of corporate incomes to aggregate tax revenues lies well below the income captured through interest earnings on the domestic debt, which means that capital incomes in Turkey are effectively untaxed, and the current mode of domestic debt management works as a direct income transfer to the holders of capital income (Cizre-Sakallioglu & Yeldan, 2000, p. 490).

When we go back to 1988, the interest payments on domestic debt to GNP ratio was around 2.4% while the corporate tax to GNP ratio was 1.8%. In this respect, the taxation of corporate capital and the interest payments transferred to them were in a rough balance. Yet, by 1998, the share of interest payments on domestic debt in GNP rose to around 14% while the corporate tax to GNP ratio remained almost the same at around 2% of GNP (Yeldan, 2001, pp. 122–123). Another way of seeing the character of this transfer mechanism is to look at the distribution of domestic debt among buyers. During 1987–2001, on average, 84% of treasury bills and government bonds sold by public were held by private banks, therefore, the banking sector appears to be the main beneficiary of the growing debt trap on the public budget. The banks in Turkey are owned by major conglomerates that use them to shore up their firms and finance dubious investment projects while at the same time enjoying 100% government deposit insurance which enables them to continue this transfer of resources without incurring any risk on their part.

In our view, Turkey is rapidly approaching a dangerous debt trap, in which rising interest payments consume the government revenues to such an extent that total debt continues to grow even though the government is not overspending. High public debt is a major concern simply because the cost of servicing it amounts to a significant portion of government spending, perpetuating the deterioration in fiscal imbalances. With the crisis in progress, the problem has essentially evolved into a self-sustaining vicious circle, running from debt stock to higher interest rates, to interest payments, to budget deficits and once again to higher debt stock.

Hence, it will not be an exaggeration to say that in the Turkish example, the state's use of fiscal operations appears to be a kind of income transfer mechanism from the wage earners, small- and medium-sized companies, and peasantry to large domestic business groups. The government bailout of private banks or undertaking of their foreign liabilities and at

the same time continuing to service public debt to these private agents have led to a commonly shared suspicion about the role of private sector in the rise of three consecutive financial crisis within the last decade. In this respect, capital flight by domestic residents appears to be one of the endogenous determinants of the growing borrowing requirement of the state. We will discuss the extent to which debt servicing of the public sector is being used to finance capital flight out of the country and, in turn reinforcing the growing public sector borrowing requirement.

3. CAPITAL FLIGHT AND EXTERNAL DEBT IN THE TURKISH ECONOMY: ON THE WAY BACK FROM THE LAND OF OZ [12]

We have tried to underline some of the key domestic factors generating the nonstop crisis era of the 1990s in Turkey. In this respect, an important issue generally neglected in the current literature is the relationship between capital flight and external debt problem in the economy. We argue that capital flight continued as a key element in the determination of economic problems of the country even after the economic liberalization reforms of the 1980s. According to our view, there is a bi-directional and contemporaneous relationship between capital flight and external debt in the Turkish economy with major consequences for the economic growth prospects of the country.

The measure we have used to identify capital flight takes inflows of capital in the form of increases in external debt and net foreign direct investment and subtracts from these inflows the current account deficit and increases in official reserves. [13] The difference between these inflows and the extent to which they are used to finance the current account deficit and to add up to the reserves reflects the increase in net foreign claims by the private sector. This increase in net foreign assets is the measure of capital flight we adopt in this paper. [14] The capital flight estimate is further adjusted for the net effect of misinvoicing of exports and imports. [15] Misinvoicing adjustment is of crucial importance in capital flight estimates for countries such as Turkey where there is (was) a strong incentive for utilizing trade misinvoicing as a mechanism for flight. Before the 1980s liberalization wave, as we discussed in detail in

the previous sections, there were strict controls and restrictions on prices, exchange and interest rates, import and export transactions (in the form of import licenses and foreign exchange regulations) while foreign exchange and bank credit were subject to severe rationing. This situation highly encouraged underinvoicing of exports (to keep the foreign exchange earnings out of state control) and underinvoicing of imports (to avoid import quotas and high tariff rates). After the 1980s, however, as a result of the export subsidy schemes (that were used as a tool to encourage exports under the new export-led growth model), the situation was reversed in the case of exports. From then on we observed overinvoicing of exports while continuing to have underinvoicing of imports because of the existence of import tariffs though on a much lower scale. [16] Because of these counteracting forces, the net misinvoicing effect may lead to the understatement of the current account deficit and hence overstatement of the residually derived capital flight estimates. In the Turkish case, the net misinvoicing effect on the current account balance, for 1974–95 has been calculated as −$1.7 billion by the current author.

The relationship between capital flight estimates and the net real external debt flows is shown in Figure 4. As can be seen from the graph, there is a close positive correlation between annual debt inflows (DD) and real capital flight (CF). The simple correlation coefficient between DD and CF is 0.89. We have estimated the total real capital flight (after misinvoicing adjustment) from the Turkish economy as $54.8 billion in constant 1995 dollars during 1974–2000. This figure is almost equivalent to 43% of total net real debt disbursements, which is around $127 billion, into the country over the same period. In other words, out of every dollar Turkey has borrowed from abroad over 1974–2000, private Turkish residents accumulated 43 cents of external assets.

It has been well documented in literature that there are strong theoretical grounds to expect external borrowing to drive and stimulate capital flight while capital flight can drive and stimulate external borrowing in return (i.e., Boyce, 1992; Diwan, 1989; Lessard & Williamson, 1987; Ndikumana & Boyce, 2003). The causality runs in both ways and therefore the model designed to capture their relationship must allow for simultaneity between both variables.
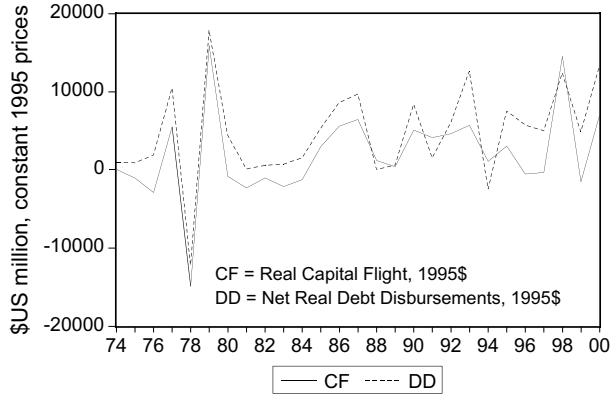
Figure 4. *External debt and capital flight in the Turkish economy, 1974–2000. Source: Author's calculations.*

4. METHODOLOGY

We will employ a method that was originally developed by Boyce (1992) (for Philippines) and Chipalkatti and Rishi (2001) (for India) that discusses the presence of contemporaneous bi-directional causality—a financial revolving door relationship—between external debt and capital flight. The idea comes from the fact that external borrowing can result in capital flight by providing the resources necessary to effect flight, and in return capital flight further fuels the external borrowing need of the country.

The basic model in literature on the relationship between external debt and capital flight was designed as a system of equations to account for the possible simultaneity bias between these two variables. [17] But, as noted by Krolzig and Hendry (2001), economic theory occupies a central role in the modeling process in "prior specification and prior simplification" (p. 840). Prior specification refers to the inclusion of potentially relevant variables while prior simplification refers to the exclusion of irrelevant ones. Yet, the existing literature does not provide a well-determined list of variables to be included in empirical capital flight models for different countries at different times. [18] Therefore we started with a general unrestricted model where we included several related explanatory variables in correlation with the above theoretical discussion on Turkish economy and deleted those which turned out to be insignificant in the regressions. [19] The general unrestricted specification (GUM) of the relation is presented in Eqns. (1) and (2) below: [20]

$$
\begin{aligned}
\mathrm{CF}_t = {} & a_0 + a_1(\mathrm{DD}_t) + a_2(\mathrm{PSBR}_t) \\
& + a_3(\mathrm{STDR}_t) + a_4(\mathrm{RINT}_t) \\
& + a_5(\mathrm{XMGRW}_t) + a_6(\mathrm{PCAMVE}_t) \\
& + a_7(\mathrm{TIPC}_t) + a_8(\mathrm{COR}_t) \\
& + a_9(\mathrm{Dca}_t) + a_{10}(\mathrm{Dl}_t) + \Phi_t, \qquad (1)
\end{aligned}
$$

$$
\begin{aligned}
\mathrm{DD}_t = {} & b_0 + b_1(\mathrm{CF}_t) + b_2(\mathrm{PSBR}_t) \\
& + b_3(\mathrm{XMGRW}_t) \\
& + b_4(\mathrm{GDPGRW}_t) + b_5(\mathrm{RINT}_t) \\
& + b_6(\mathrm{TIPC}_t) + b_7(\mathrm{Dca}_t) + b_8(\mathrm{Dl}_t) \\
& + \Delta_t. \qquad (2)
\end{aligned}
$$

We have started with a dynamic GUM that generalized Eqns. (1) and (2) with six lags for all variables and then proceeded by eliminating the insignificant variables step-by-step while applying diagnostic tests to check validity of the reductions. Following this process, and also applying Akaike Information Criteria (AIC) and Schwarz Information Criteria (SIC), the final specification of the equations has been selected. The final form also has the lowest standard error of regressions and the highest adjusted R^2. [21]

After the reduction, the eliminated variables include: change in real official reserves, taxes on income, profits and capital gains as a percentage of current government revenue and a dummy variable for 1989 to capture the effect of capital account liberalization in that year.

In Eqns. (1) and (2), the subscript t refers to 1974–2000. [22] All values are adjusted with 1995

real dollar prices by the US Wholesale Price Index (WPI). CF is the residual estimate of annual capital flight; DD is the net debt disbursement; COR is the change in country's official foreign exchange reserves; [23] SDTR is the ratio of short-term external debt to official reserves which can be used as an indicator of borrowing country solvency in times of financial distress. [24] GDPGR is the percentage rate of growth of real Gross Domestic Product (GDP); RINT is the difference between real US treasury bill rate and real interest rate on government debt instruments (real interest rates are calculated as $\log((1+i)/(1+p))$ where i is the nominal interest rate on three-month treasury bills, p is the inflation rate as measured by WPI). The difference in domestic and international real interest rates is assumed to reflect not only arbitrage gains but also country risk differentials encompassing both exchange rate risk and political risk (e.g., Edwards, 1984; Frankel & Okongwu, 1996). [25] NX is the net export (export–import) growth rate; XMGRW is the export–import ratio growth rate; PCAMVE is the percentage change in annual variance of monthly exchange rates measured by local rate of US dollar in current price; PSBR is the public sector borrowing requirement (including grants) as a percentage of GDP; TIPC is the taxes on income, profits and capital gains as a percentage current government revenue; and Dca is a constructed dummy variable that takes the value of zero prior to 1989 and one thereafter. The reason we used this dummy variable is mainly to take into account the effect of capital account liberalization of 1989. Dl is a dummy variable for 1980 to test for the effect of opening-up of the economy.

We expect to find a positive correlation between DD and CF in Eqn. (1). In this respect, a positive and significant a_2 would prove the existence of a simultaneous liquidity effect where the foreign borrowing provides the investors with the necessary funding for capital flight. On the other hand, it is expected that the change in the level of a country's foreign exchange reserves as well as the ratio of short-term debt to reserves will be negatively related with the capital flight. This can be explained by a simple model where increasing reserves send positive signals to investors regarding low likelihood of a potential foreign exchange and liquidity crisis, and hence may lower the incentive for capital flight. RINT is expected to have a positive relationship with capital flight,

which is to say, as interest rate differentials increases the possibility of a capital flight in the economy also rises. The liberalization of the capital account in 1989 is expected to increase the capital flight in the economy by making it much easier for investors to flee out of the country in times of crisis. Therefore, the dummy variable in the equation is expected to have a positive coefficient. It is also possible that otherwise illegal or unrecorded methods of capital flight (such as money smuggling or trade misinvoicing) will be shifted to legal official methods following the freeing of capital account restrictions and therefore the real level of capital flight may remain unchanged thereafter. There is no unanimous agreement in literature on the expected sign of the PSBR variable. While a positive public sector borrowing requirement coefficient may suggest that higher public sector deficits trigger capital flight because of increasing risk of fiscal crisis, high deficits may also reduce capital flight if such deficits are used to finance public investments that might have "crowding-in" effect on private investment. Likewise, high public sector deficits may discourage further capital inflows for the rollover of the debt hence may have a reverse effect on capital flight by reducing the pool of foreign creditors for lending. In this case one would expect a negative PSBR coefficient. Therefore, the ultimate sign of the PSBR coefficient is to be determined by the relative weights of these opposing forces. The sign of XMGRW variable is also uncertain. On the one hand, increasing export–import ratio may send positive signals to domestic investors and hence increase domestic investment while reducing capital flight. On the other hand, if the investors remain skeptical about the long-term prospects of the economy, increasing export earnings may be transferred abroad in the form of capital flight instead of returning it to the economy for new investment projects. PCAMVE and hence instability in exchange rates are expected to increase capital flight by deteriorating uncertainty in the economy. Investors may be expected to remain liquid in the face of uncertainty regarding real value of their investment projects. TIPC is expected to have a positive sign reflecting investors' sensitivity regarding their tax liabilities. Dca and Dl are expected to have a positive sign. Increasing financial liberalization is expected to increase capital flight by making it easier for investors to transfer their capital abroad. This may, however, only shift the unrecorded capital flight to

recorded and hence not affect the net amount of flight.

When we turn to the second equation, one would expect a positive association between CF and DD. A positive and significant b_1 may suggest that capital flight sets the stage for the turnover of capital in a "revolving door mechanism" via providing the necessary funds for private investors to flee the country. In return, capital flight necessitates new external borrowing by public and private agents because of depletion of necessary funds in the domestic economy. The sign on the PSBR coefficient is again uncertain because of the fact that rising deficits may increase the demand for foreign borrowing for the rollovers—especially if the domestic capital markets are small and under-developed, but this may also reduce the pool of foreign creditors to the country. In addition, the sign of XMGRW is undetermined; increasing export ratio may increase external debt through trade or investment credits. But, increasing export earnings may also reduce dependence on foreign borrowing for financing and hence decrease demand for new borrowing. Similarly, the sign of the GDPGR coefficient is also undetermined. The supply-side economics argue that higher GDP growth rate increases the supply of foreign credits available to a country. The effect on the demand for foreign borrowing, on the other hand, is unclear. Rising growth rates may increase the demand for new borrowing to finance new investment projects but it may also decrease it by reducing dependence on external resources. The sign of RINT coefficient is determined by the counteracting forces of demand and supply. A high value of RINT is expected to reduce the demand for external borrowing while increasing the supply pool of foreign creditors. Yet, the sign of the dummy variable may take either a positive or negative value depending on the effects of capital account liberalization on the demand and supply of foreign borrowing. TPIC is expected to have a negative coefficient reflecting the fact that increasing taxation of income, profit and capital earnings reduces the need for external borrowing for public finance. Dca and Dl are expected to have positive coefficients meaning that economic liberalization and increasing integration with the world markets increases the availability of foreign credits and hence stimulate external debt disbursements.

Following the above methodology, we ended up with the following final specification.

To allow for simultaneity between CF and DD, the system of equations was estimated by using Three-Stage Least Squares method (3SLS).[26]

The 3SLS estimation method gave the following results[27] (t-ratios are in parenthesis, * indicates significance at $p < 0.01$, ** indicates significance at $p < 0.05$, *** indicates significance at $p < 0.10$):

$$CF = -1244.329 + 0.688^*DD_t - 81.521^*PSBR_{t-1}$$
$$\underset{(-0.780)}{} \quad \underset{(5.566*)}{} \quad \underset{(-0.448)}{}$$

$$-211.178^*STDTR_t + 499.302^*RINT_{t-1}$$
$$\underset{(-0.922)}{} \quad \underset{(0.183)}{}$$

$$+5136.74^*XMGRW_{t-1} + 347.394^*PCAMVE_t.$$
$$\underset{(1.949**)}{} \quad \underset{(2.371**)}{}$$

Adjusted R^2: 0.76 Wald χ^2 test (overall): 77.65*

$$DD = -4936.251 + 0.564^*CF_t + 822.477^*PSBR_t$$
$$\underset{(-2.731*)}{} \quad \underset{(2.277**)}{} \quad \underset{(3.505*)}{}$$

$$+7362.504^*XMGRW_{t-1} + 545.514^*GDPGRW_t$$
$$\underset{(2.103**)}{} \quad \underset{(4.433*)}{}$$

$$+4569.024^*RINT_t.$$
$$\underset{(2.298**)}{}$$

Adjusted R^2: 0.88 Wald χ^2 test (overall): 366.127*

Wald χ^2 test for joint significance of a_1 and b_1: 35.654*

In both equations, the coefficients of endogenous variables, DD and CF, are positive and significant at 1% and 2% levels showing the strong contemporaneous correlation between debt and capital flight. Furthermore, the Wald χ^2 test statistics in overall results are significant. The joint significance of a_1 and b_1 also supports the above statement showing the strong causality between DD and CF variables.[28] The above results clearly validate our initial hypothesis that there is a two-way relationship between external debt and capital flight.[29]

The negative but significant PSBR coefficient supports the supply side arguments about credit availability. We found positive but statistically insignificant association, in contrast to our expectations, between real interest rate differentials (RINT) and capital flight. One possible explanation might be the fact that we have used annual averages for interest rate differentials and considering the high volatility of overnight interest rates in the Turkish market (that could jump as high as 7000% in the interbank market in February, 2001 crisis), this may lead to this unexpected significance level of the variable. Likewise, because of the shortness of interest rate movements, in contrast to

arbitrage seeking hot money flows, changes in interest rates overnight may not be expected to affect annual capital flight variables. [30] Finally, according to the arguments of this paper, capital flight in Turkey is not driven by interest rate differentials in the international markets. The argument that sees capital flight as a portfolio problem, with domestic investors choosing between local and international assets based on their relative expected returns does not explain the two-way flow of funds in the Turkish economy.

The short-term debt to official reserves variable (STDTR) had an insignificant coefficient with an unexpected sign (negative). One possible explanation for this result might be the fact that increasing the STDTR ratio might be perceived as an indicator for the likelihood of an approaching financial crisis. This, as a result, may reduce supply of foreign funds available and therefore reduce the annual external debt disbursements into the economy, which in return reduces our annual CF calculations. A positive and significant XMGRW coefficient shows that improving export performance is instrumental in increasing capital flight estimates. One possible motivation behind this is that exporters prefer to shift their earnings overseas rather than returning it back to new investment projects in the country. A positive and significant PCAMVE variable ($p < 0.03$) supports this interpretation by showing that increasing exchange rate instability stimulates capital flight. Therefore, given high instability and investment risk factors in the economy, investors are avoiding engaging in long-term investment projects and instead preferring remaining liquid by different ways such as capital flight. In contrast to theoretical rhetoric, the TIPC variable turned out to be insignificant and had limited explanatory power in explaining capital flight determinants. Therefore this variable is dropped in the final specification. This also invalidates the claim that high taxes on income, profit and capital earnings is stimulating capital flight in Turkey. In contrast, as we discussed in the previous section, capital in Turkey is highly untaxed and most of the tax burden lies on wage earners and low-middle income groups in the country. The COR variable is also dropped because of its endogeneity problem with the CF and SDTR variables. It is found that the STDTR variable performs better in regressions when included than COR. The Dca and Dl variable are dropped out of the final specification as well according to our method-ology outlined in the above section. In contrast to our expectations, neither economic reform programs of the 1980s nor capital account liberalization of 1989 had any significant explanatory power in our capital flight estimates.

In the DD equation, we found a positive and significant effect (at $p < 0.01$ level) of PSBR variable consistent with our discussion in the previous section regarding the growing public sector debt burden and the resulting external borrowing either directly or though the intermediacy of the private banks (also note that simple correlation coefficient between these variables is 0.45). [31]

The XMGRW variable appeared to have a positive and significant explanatory power in external debt flows. This shows that increasing export performance (or increasing import substitution) increases the demand for external resources in the economy. The GDPGRW variable, on the other hand, turned out to have a positive and significant effect on external debt disbursements. This might support the above thesis regarding demand and supply side arguments that higher growth rates increased the demand for foreign funds to finance growing investment and consumption levels in the country. Increasing growth rates may also be instrumental in increasing the pool of creditors for lending due to improving creditworthiness.

The RINT variable had a significant and positive sign showing that again similar factors as in the CF equation might be in force. Second, demand-side factors might be more important in the debt flows in this case. The explanation, in our view, lies in the fact that ever-growing public debt and accompanying high PSBR that leaves the public sector with no choice other than accepting the lending at whatever rate given by the market (which is dominated by a few powerful players). In addition, the bailout of 18 private banks, during 1997–2001, which left the public sector with an additional $15.5 billion of new borrowing requirement is important to show that continuation of public borrowing was not only a need but a must as well for the public finance in Turkey.

The dummy variables and TIPC turned out to be rather insignificant and have no further explanatory power in the regressions and therefore dropped out of the regressions in the final specification. Especially the exclusion of Dca variable is instrumental in showing that in contrast to expectations the capital account liberalization of 1989 has not changed the capital

flight flows in the economy. The insignificance of both dummy variables in both equations might be interpreted that liberalization programs of the 1980s in general did not lead to a radical change in the behavior of private agents in terms of size of the capital flight or in the annual external debt disbursements. Another possible interpretation of this might be the change in the forms of capital flight, e.g., from trade misinvoicing to other forms. The same can be said about the external borrowing levels of the public sector. While it was the public sector that borrowed from abroad prior to 1989, from then on the main borrower was the private sector (with the motivation of lending it to the public sector for arbitrage gains). Hence the external borrowing totals were not radically different before and after 1989. Moreover, the FDI figures did not show any radical change but remained at marginal levels ($600 million on average during the 1990s) following the opening up of capital account, and therefore did not reduce the borrowing needs of the country. Finally, we note that the explanatory variables in both equations can explain 76% and 88% of the variance in the CF and DD variables respectively.

5. CONCLUSION: MIXED RESULTS

We have shown that there exists a bi-directional and contemporaneous relationship between external debt flows and capital flight in the Turkish economy. The findings of this paper have important policy implications for the country. In contrast to the generally accepted view between International Monetary Fund and World Bank technocrats that links the capital flight mostly to domestic factors such as poor economic management or unsound economic records of the debtor countries, our analysis suggests that economic liberalization programs themselves are not a magical powder to eliminate the existing structural problems in an economy. Instead, these ambitious liberalization programs themselves may be detrimental to the long-term growth prospects of the countries once mixed with domestic policy failures and clientalistic business-state rent-seeking coalitions.

It can further be argued that the increasing external wealth accumulation of the few has been made possible by the increasing external indebtness of the public sector. There are serious questions to be answered in the Turkish case such as who is paying for these public sector losses that is exacerbated by each real devaluation of the domestic currency. The bulk of Turkey's interest bill to banks for debt service ends up as interest, rent and profit income for Turkish investors who hold assets abroad. Foreign banks just act as financial intermediaries between domestic agents. The forced savings (through IMF-guided austerity measures) needed to achieve the income transfer required by the debt service are possible only by the depression of real economic activity and real wages. [32] Indeed, to the surprise of many but not all, we have been witnessing a regressive redistributional mechanism massively transferring resources from workers and firms with Turkish Lira income in the real sectors to the few who play as arbitragers possessing assets abroad and enjoying the growing debt burden of the public sector. The same process might be going on in any other country that has financed capital flight with debt.

Another interesting fact in the Turkish case is the strange coincidence between government take-over of failing private banks and the acquisition of foreign assets by private agents. As we have discussed in the first part of the paper, the use of state banks for political rent distribution is not a novel phenomena in Turkey. The findings of the paper support the thesis that growing borrowing requirement of the state and the resulting external debt stimulates (and also is stimulated by) the capital flight and the acquisition of foreign assets by a wealthy few in the country.

It would also be helpful to find out what types of foreign assets residents have acquired abroad. Are they mostly anonymous assets in Switzerland or insured deposits in the United States (which then open the door to the idea of financing the foreign borrowing of the country through the intermediacy of foreign banks at a high cost)? Answers to these questions would contribute to the findings of this paper suggesting policy recommendations for what can and should be done about it.

The Turkish trajectory in the post-liberalization era, on the other hand, displayed some interesting results in terms of the existence and the continuation of the rent-seeking coalitions formed during the ISI era prior to the liberalization wave of the 1980s. The distribution of rent between the business and state bureaucracy, in this respect, appears to be the distinguishing elements of Turkish liberalization experience. The attempts to downsize and

reduce state control and regulation in the economy have yielded (un)expected results in terms of state–business–society relationship. The state has been given a more direct role in transferring the economic surplus extracted from the society to the business sector. As a result, decreasing living standards of the masses and deteriorating public balance have coincided with increasing wealth of the few. In the end, one side effect of the ongoing economic crisis in the country has been the insulation of the state from social pressures. This isolation of the political class from the rest of the society also strengthened the resistance of these groups to any criticism of their subsequent conduct and helped to deepen the fragmentation among different groups in the society.

As a final word, if the increasing external debt of Turkey has only been an instrument to finance capital flight rather than to provide the necessary resources for the growth prospects of the country, then "the legitimacy of efforts to service external debt" (Diaz-Alejandro, 1984, p. 379) or the legitimacy of any kind of government guarantee on private sector liabilities comes into question.

NOTES

1. For a detailed discussion of the financial deregulation and trade liberalization programs and their effects on growth performance in developing countries, see World Bank (1997), Knight (1998), Eichengreen (2000), Gabriele, Boratav, and Parikh (2000), and Stiglitz (2000).

2. The liberalization experience of the 1980s in Turkey has been well documented and discussed in the literature and therefore we will limit our discussion of this era with a brief sketch of the key reforms. For a detailed analysis of Turkey's 1980 liberalization program, see, e.g., Aricanli and Rodrik (1990).

3. For a detailed analysis of this relationship between the state and the business class, see Keyder (1987) and Bugra (1994).

4. As a part of this program, Turkey was provided with five successive structural adjustment loans (SALs) from the World Bank (WB) during 1980–84. In addition to financial resources made directly available, the program was also instrumental in encouraging a significant flow of resources from other official creditors, mainly from the governments of other OECD countries.

5. These restrictions on political parties and labor unions were finally lifted after a referendum in 1987.

6. As observed by Kumcu (1997, p. 31); "Turkey [is] one of the seven countries in the OECD to have the least number of restrictions on capital account transactions." The factors leading to the opening up of the capital account of balance of payments in the Turkish economy is well discussed in literature, e.g., Ersel (1996).

7. For an overall analysis of the detrimental effects of volatility of short-term capital flows see, e.g., Stiglitz (2000) and Taylor (1998).

8. During this period there were no large fluctuations in the inflation rate, which averaged 54% (using wholesale price index) as a whole.

9. For a general view on the disruptive effects of the international capital flows on domestic markets and the moral hazard problem associated with the state guarantee on private sector debt and bank deposits, see, e.g., Edwards (1998), Felstein (1999), Eichengreen (2000), Rasich (2000), and OECD (2001).

10. See, e.g., Diaz-Alejandro (1984, p. 379).

11. The consequences of diminishing real wages, expansion of the informal economy, together with the widening distributional conflicts in the society are evident through the opening up of the already large income gap among different income groups. While the highest 20% of the population have managed to receive almost 55% of total disposable income over the last two decades, the remaining 80% have had to afford their living with the other 45%. Furthermore, the gap widened over the last decade especially after the implementation of full capital account liberalization in 1989 (Kasnakoglu, 1997, p. 58). The share of lowest 5% of population in national income dropped from 0.7% to 0.69% during 1987–94, while for the same period the ratio for the highest 5% have risen to 30.34% from around 23%. The

regional disparities have also widened. While Marmara region collects 40% of the total income generated in the country, Southeastern part receives only 4% (Sonmez, 1998). Another important indicator of the deteriorated in come distribution is the change in the Gini coefficient during the past decade which increased from 0.44 in 1987 to 0.49 in 1994. For a discussion of the effects of structural adjustment programs on labor markets see also, e.g., Senses (1996).

12. The current paper utilizes WB (2002), IMF (1981, 1988, 1994, 2001a, 2001b, 2003) and Central Bank of Turkey (CBRT, various years) Online data dissemination system for capital flight calculations and also for the variables employed in the econometric model.

13. We have also considered the currency valuation effects on the stock of external debt. Around 30% of Turkish external debt is denominated in German Marks, and for the period we are analyzing, dollar gained on average 15% value over the Mark. Therefore the net effect would be 5% which does not cause any significant change in the findings of the paper, hence we ignored the dollar/mark changes on the external debt for practical purposes.

14. This method of identifying capital flights has been employed by several other sources, i.e., Diaz-Alejandro (1984), Erbe (1985), World Bank (1985, p. 64), Lessard and Williamson (1987), Boyce (1992), Chipalkatti and Rishi (2001). There is also a residual definition of capital flight applied in the literature that considers the errors and omissions as unreported short-term capital flight. There are a couple of problems with measuring capital flight in this way. First, the errors and omissions consist of more than unreported short-term capital flows. Second, the case for considering only short-term funds is not very persuasive given the flexibility in current financial markets to transform any kind of long-term financial assets to liquidity at relatively low costs, and hence an investor may acquire long-term financial assets with the same motivations as the one for short-term assets. Therefore, whether the ultimate aim is to come up with a measure of the private sector's acquisition of foreign assets or the component of these assets that can flow and reflow quickly, considering long-term capital flows gives a more complete picture other than just trying to capture short-term capital flows from our perspective in this research.

15. The estimates for misinvoicing are generated by utilizing the partner–country trade statistics of Turkey with the industrial countries (which includes the countries defined by the IMF Direction of Trade statistics). The data utilized are obtained from OECD (1997) and IMF Direction of Trade Statistics (various issues) with a 5% cif/fob adjustment, which is the average rate for Turkey for the period in question. The reason for selecting only the industrial countries comes from a practical reason that the partner–country analysis relies on accurate reporting of the partner and if both countries have fake invoicing then it becomes impossible to differentiate between over- and underinvoicing. Here we assume that the industrial countries report their trade data accurately. We made the corrections for 1974–95 assuming that after Turkey's accession to Customs' Union with European Union, whereby the custom duties and any other kind of trade barriers have been abolished, eliminated any incentive for misinvoicing. There might be several other reasons behind the differences in partner country data comparison method for tracking the trade misinvoicing adjustment. One possible explanation is the timing lag discrepancies due to transit or recording mismatches. The timing lag explanation may also work through the different exchange rates at the time of conversion from (or to) the local currency. Mistaken recording of destination or origin of trade data may also cause differences in the reports of trading partners.

16. For a discussion of the over invoicing, tax rebates and virtual exports in Turkey see, e.g., Rodrik (1988).

17. I have used Spencer and Berk test for exogeneity (Greene, 1993, p. 764). The calculated Wald test statistic has validated endogeneity of DD and CF.

18. A similar point is argued by Ndikumana and Boyce (2003).

19. During this process, the existing specification is simplified only when no diagnostic test rejects its null. This method of specification from a general unrestricted model to a final reduced form is supported by the findings of several researches in the current literature. See for instance Hendry and Erickson (1991) and Krolzig and Hendry (2001).

20. In the final specification both Eqns. (1) and (2) have been tested for the order and rank condition of identification.

21. The regressions were also tested for robustness to time changes before and after 1980, and the results were consistent with each other.

22. The data are taken from IMF *International Financial Statistics* (2001a, 2003), World Bank *World Development Indicators* (2002) and Central Bank of Turkey Online Data Distribution System.

23. The reason we employ the change instead of level of official reserves comes from the assumption that an increase (decrease) in official reserves sends positive (negative) signals to private agents for the possibility of devaluation in the country. Investors who see that official reserves are decreasing is assumed to engage in capital flight before the reserves is depleted.

24. Official reserves are calculated net of gold reserves and both variable are with current dollars.

25. For simplicity we assume that the nominal interest rate already includes the risk premium resulting from uncertainty (political risk) and nominal devaluation (exchange rate risk) in the economy.

26. The system of Eqns. (1) and (2) was first estimated using Two-Stage Least Square estimation method. The results indicated the existence of significant contemporaneous crosscorrelation between the structural disturbances, therefore Three-Stage Least Squares estimation method has been used to obtain more efficient estimates (i.e., lower standard errors) of the structural coefficients.

27. The residuals from the 3SLS estimation have been tested for first and second-order serial correlation by Breusch and Godfrey LM test. The presence of autoregressive conditional heteroscedasticity is also tested by Engle-LM test. Normality assumption is tested by Jarque–Bera test statistics. According to the findings of the tests, the residuals did not violate any of the classical assumptions.

28. We have also applied Granger causality test for DD and CF variables yet the power of the test results is limited probably because of the existence of predominantly contemporaneous association between the variables. (Since Granger causality test requires the stationarity of the variables involved, we have applied Augmented Dickey-Fulley Unit Root Test on DD and CF variables and have showed that they are stationary.) In addition, existence of stronger causality from Debt to Capital flight (at lag order one) is instrumental in showing that growing public deficit and the resulting increase in external debt is being used as a transfer mechanism for capital flight. The bailout of private banks and also considerable duty losses of public banks, resulting from politically motivated subsidies to the private firms, support our original hypothesis. These losses of the public sector, that are financed through new borrowing operations, are transferred to the Swiss accounts of these private individuals.

29. The following Instrumental Variable (IV) models are also estimated separately by ordinary least squares (OLS) procedure for CF and DD variables.

$$CF = -4495.264^* + 1.232^*(DDinst)^*$$
$$- 171.374^*D(PSBR)^{**} - 212.914^*(STDTR)^{**}$$
$$+ 597.959^*D(RINT) + 7724.525^*(XMGRW)^*$$
$$+ 338.5448^*(PCAMVE)^*.$$

Adjusted R^2: 0.977; F-statistic: 178.256; Prob (F-statistic): 0.000

$$DD = 2128.537^* + 0.958^*(CFinst)^* + 73.477^*D(PSBR)$$
$$- 4914.365^*(XMGRW)^*$$
$$+ 203.690^*(GDPGRW)^* + 1512.407^*D(RINT).$$

Adjusted R^2: 0.977; F-statistic: 219.639; Prob (F-statistic): 0.000

∗ Indicates significance at $p < 0.01$, ∗∗ indicates significance at $p < 0.05$. D( ) indicates first differencing of the related variable. Inst refers to the instrumental variable estimate for the relevant dependent variable where other exogenous variables are used as instruments to derive an estimate of CF and DD variables. The OLS instrumental variable estimates yield stronger results and support our initial conclusion that there exists a bidirectional causal relationship between CF and DD variables.

30. In a different analysis and this time exploiting monthly data, Balkan, Bicer, and Yeldan (2002) encounters a similar problem but this time regarding the sign of the interest rate variable.

31. For a discussion on the effects of financial capital inflows in the post-1990 Turkish economy, see, e.g., Balkan and Yeldan (1998) and Balkan *et al.* (2002).

32. For a detailed analysis of this see, e.g., Celesun (1989), Ozmucur (1992), and Boratav and Yeldan (2002).

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