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Hidden Public Expenditures and Economic Performance in Iran*

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Abstract

The existence of public expenditures and liabilities outside the official budget makes it difficult to use fiscal data for evaluating government policies and programs. It also creates risks for the macroeconomy. We examine the size and nature of extra-budgetary funds (EBFs) in the case of Iran. We show that such funds are truly large and play significant, adverse roles in the Iranian economy. Adjusting the budget and GDP figures to account for the resources of these funds shows that the size of government and its deficit are much larger than the official data indicate. The picture that emerges after the adjustments conforms well to the realities of the Iranian economy and clarifies the role of fiscal policy in its instability. The complex and hidden nature of the EBFs has made it difficult in the past for policy analysts to assess the situation more clearly and seek effective solutions to the problem. Our analysis of the EBFs and the incentives for their existence suggests that greater involvement of the public in the budget process and pressures for greater transparency and comprehensiveness of the budget are important factors that can bring about change toward increased efficiency in the budget and the economy.

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Key words: Fiscal Policy, Extra-Budgetary Funds, Political Economy of Iran

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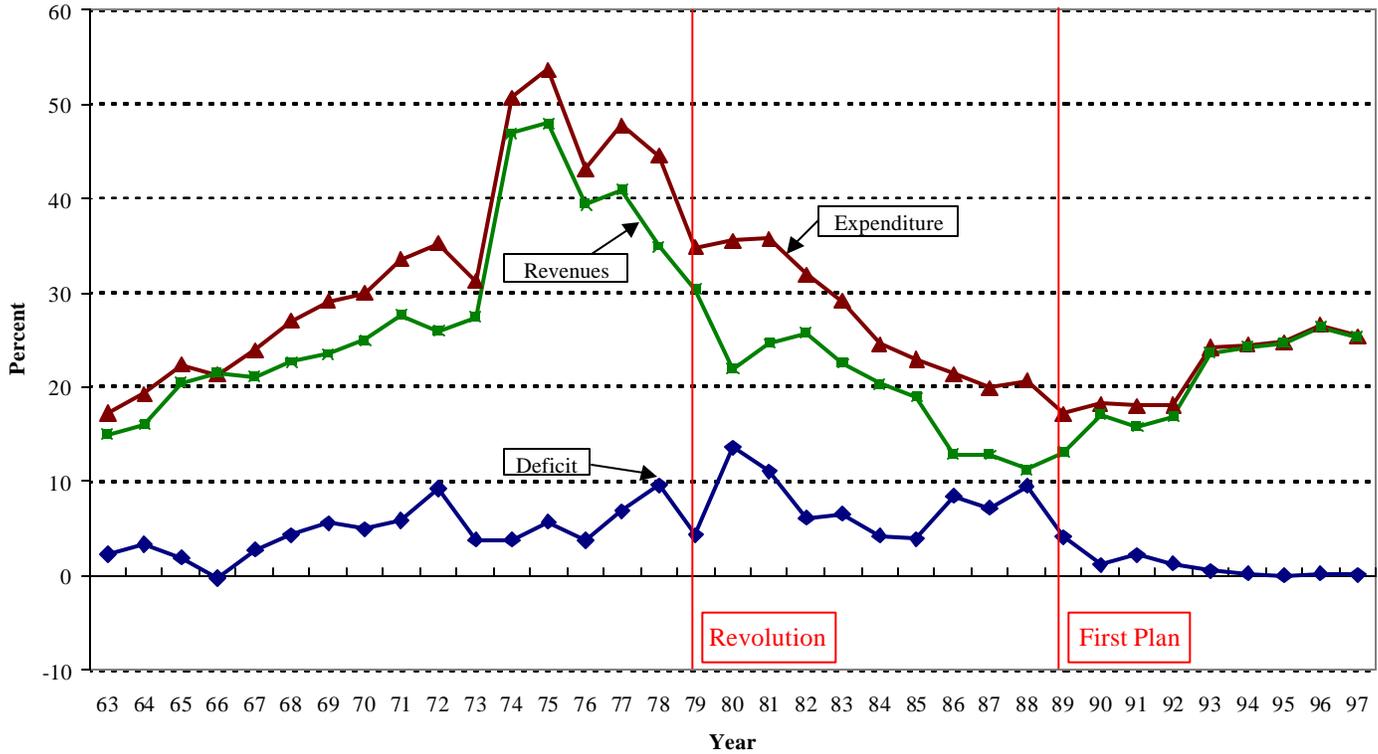
1. Introduction

Fiscal accounts are meant to show how much and where the government spends public funds or commits the country's resources to future payments. Information from government accounts is essential for evaluating government policies and programs in terms of their contribution to addressing social and economic needs and their impact on macroeconomic performance. But, there is a common problem in published fiscal data that must be addressed before they could be put to use. The difficulty is that governments typically have some expenditures and debts that are not reflected in their official accounts. The extent of concealment varies across countries and activities and the users of fiscal information need to be sensitive to the causes and consequences of such variation. Middle Eastern countries have their own share of hidden spending and liability and some—such as Iran, Turkey, Morocco, Syria, and Persian Gulf countries—stand out among nations in the scope and size of fiscal activities that they keep off budget. In this paper, we examine the case of Iran, where huge public funds are appropriated and redistributed outside the formal budget. The case is instructive because it shows the wide range and enormity of hidden government expenditures and commitments that affect the public. It also displays the dire consequences that lack of proper government accounting and reporting can bring to a country.

Comparing the official records of public finances and the economic performance in Iran illustrates the types of puzzles that arise as a result of large off-budget activities. As Figure 1 shows, the official records suggest that in the last decade the size of fiscal expenditure as a share of GDP has been relatively modest and budget deficit has been negligible (see Figure 1). This picture is difficult to reconcile with macroeconomic instability and, especially, the volatile and rising inflation during the same period (Figure 2). If the government did not have a deficit, it could not have faced financing problems that lead to excessive money creation and accelerating inflation. The official fiscal picture is also incompatible with the image of the Iranian government as the recipient and distributor of enormous oil revenues that have made all sectors of the economy dependent on government handouts. As we show in this paper, the puzzle can be solved by accounting for substantial government expenditures and liabilities that are left outside official accounts. Indeed, our estimates indicate that about seventy percent of total public expenditure since the 1979 Revolution has been channeled through extra-budgetary mechanisms! The adjustments that we make in the official data to arrive at more realistic figures further show that in the last two decades, fiscal deficit has on average been close to 5% of GDP and has persisted in recent years. These findings yield an alternative perspective that accords much better with Iran's macroeconomic performance and sheds light on the sources of instability.¹

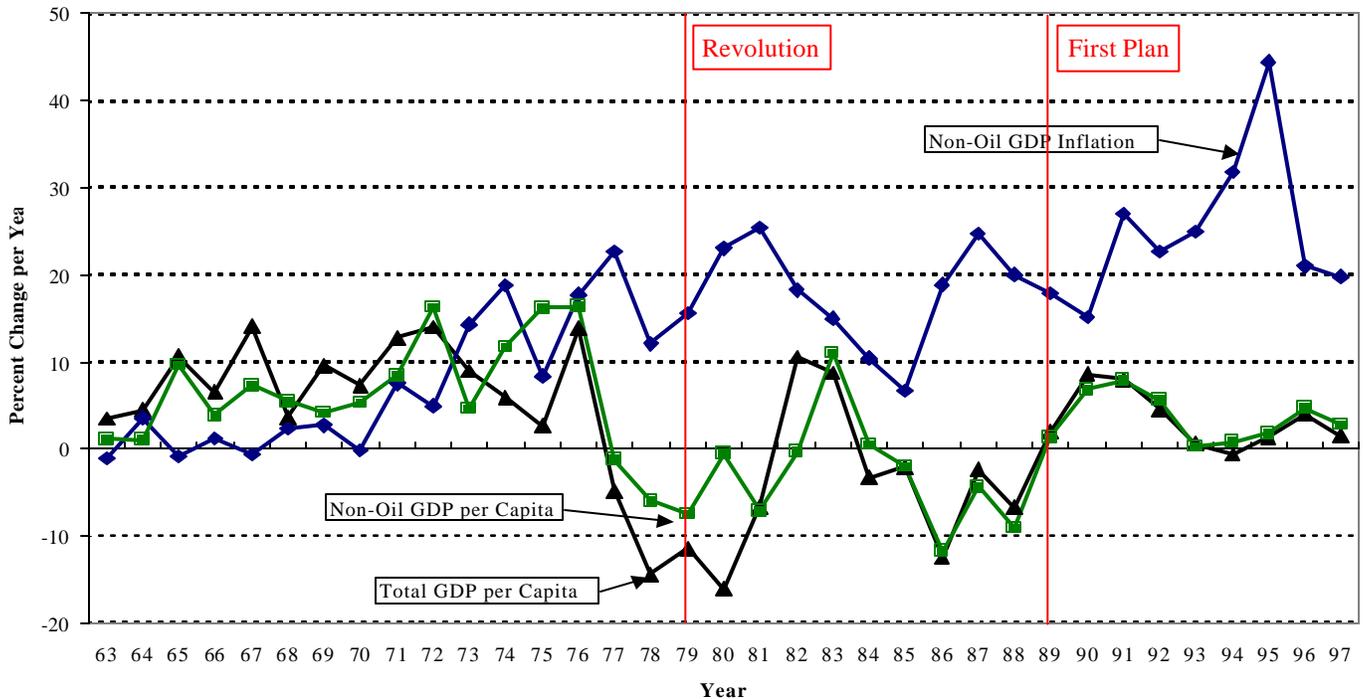
¹ For concise survey of the existing literature on fiscal policy in Iran, see Mazarei (Forthcoming).

Figure 1
Total Government Expenditure, Revenue, and Deficit
as Percentage of GDP: Official Values



Source: Plan and Budget Organization (1997) and its updates.

Figure 2
Inflation and Per Capita GDP Growth in Iran: Official Values



Source: Plan and Budget Organization (1997) and its updates.

The existing studies that deal with various forms of extra-budgetary activity typically describe the different ways in which governments incur hidden expenditures and argue for fiscal transparency.² The literature has paid little attention to the reasons why such activities are more common in some countries than others or what factors may encourage governments to keep fiscal information explicit and transparent. Also, there have been few attempts to produce a broad picture of the scope and size of such activities in a given country. In this paper, in addition to coming up with a comprehensive measure of off-budget public funds and commitments in Iran, we explore the reasons why the use of such funds has taken an extraordinary proportion in the country. The analysis has important implications for the need and possibilities for reform in Iran and other countries where off-budget activities are substantial.

The data and analysis in this paper refer to the general government budget. We start with the official budget data includes all levels of government except municipalities, public enterprises, and the quasi-public institutions under the control of the Supreme Leader. The budget shows part of the transactions between the excluded entities and the government, but the actual values are disguised by the accounting practices. Our assessment of extra-budgetary funds (EBFs) completes the picture and covers all resource transfers to and from government and para-statal units.

We begin in section 2 by the analysis of the issues and experiences regarding extra-budgetary funds. We then discuss the role of government in the Iranian economy and assess the off-budget revenues and expenditures in section 3. Section 4 discusses the reasons why an inefficient fiscal system has come about in Iran and derives implications for reform. Section 5 concludes.

2. Extra-Budgetary Funds and Fiscal Performance

EBFs are government expenditures and liabilities that do not directly enter budget accounts. To finance extra-budgetary expenditures, typically legislation or some other rule designates specific sources, but not a particular budget. For example, proceeds from a tax levied on a given activity or a tariff imposed on certain imports may be assigned to an EBF. Even the choice of the tax or tariff rate may be delegated to those in charge of the EBF. Some EBFs, however, have no specific source of finance and function by creating liabilities that are later on absorbed in government debt, sometimes without even being mentioned in any annual budget. A case in point is implicit or explicit government guarantees that have no budgetary provision when they are incurred, but draw on public resources when they are called.

² For a review of the role of EBFs in fiscal performance see von Hagen and Hardin (1995) and IMF (1999b). Polackova (1998) offers a good survey. IMF's website, www.imf.org, also provides discussions on fiscal transparency and a list of references. The literature is produced mostly by International Monetary Fund (IMF) and the World Bank publications.

There are three different reasons why governments create EBFs. First, an EBF may be set up to help simplify the budget by separating out clear and straightforward tasks that can be automated and run autonomously with their own sources of finance. For example, in many countries pensions are administered as EBFs that are financed by social security taxes.

Second, the government may want to keep some expenditures outside the budget to give the executive or a particular agency flexibility in carrying out tasks that would be cumbersome or impossible to perform under normal budgetary procedures. A well-known example of such an arrangement is the Iran-Contra affair in the mid-1980s whereby some members of the Reagan Administration bypassed the United States Congress's restrictions on aid to Contra rebels in Nicaragua by means of proceeds from illegal sale of arms to Iran. Although gaining flexibility through extra-budgetary mechanisms is rarely as dramatic, the purpose is generally the same: avoiding rules that are deemed too restrictive. This includes conditions imposed by external agreements and treaties. Easterly (1999) documents a host of example showing ways in which developing country governments have tried to circumvent IMF conditionality in order to avoid the required fiscal adjustments. Many European Union countries have also resorted to unabashed financial engineering to meet the requirements of Maastricht Treaty for joining the euro monetary union.

It should be pointed out that discretionary EBF arrangements for gaining executive flexibility are not the same as the emergency or slush funds that are commonly available to the executive as part of the budget. Besides being outside the budget, discretionary EBFs are generally used for non-emergency and predictable tasks. EBFs also tend to be larger than the emergency funds, and in some cases can become quite substantial. For example, in Turkey discretionary EBFs grew fast after 1980 and reached about 11% of GDP by 1990. (Önis and Webb, 1994: 152). Another example is Brazil under the military regime (1964-1985), where the executive treated the budget law essentially as an indicative document and made another budget of its own over which it had full control and could easily modify it during implementation (Coes, 1995: 61). In many countries, public enterprises are set up as EBF mechanisms by keeping them outside the government budget while putting them under the control of ministries or government agencies. The extra-budgetary status enables the enterprises to be flexible in terms of their activities (e.g., purchases, salaries, bonuses, and hiring). This flexibility is needed for running an enterprise, but it also offers an opportunity for the government to finance its non-commercial objectives by reallocating enterprise resources. For example, public enterprises may be required to offer their products at prices below market equilibrium to government agencies or consumers and private entities. Also, public enterprises may be directed to employ workers at premium wages, recruit acting or retired bureaucrats and military personnel to supplement their incomes, or to purchase goods and services from particular suppliers at above market prices.

Third, the government may want to keep certain expenditures outside the budget to shield them from annual review in the budget process. For example, this kind of arrangement is used in some countries to guarantee food or energy subsidies regardless of other budgetary needs. Of course, to finance such schemes, the government must have access to resources that can be dedicated to the fund or it must be able to use its regulatory power to channel private resource toward the target expenditures. For instance, in many oil-producing countries where the government owns the oil resources, energy is subsidized by setting a low price for the raw oil. In this way, the subsidy becomes implicit and is not reflected in government spending or in its revenues from domestic oil sales. Another example is food subsidies that are sometime financed by a multiple exchange rate system, whereby an overvalued exchange rate is applied to the foreign currency that the government uses for food imports, as in Iran and Egypt (before its exchange rate unification). In that case, the proceeds from the sale of foreign currency recorded in the budget are artificially low and offset the unreported subsidy on food imports. The government may supplement such an EBF with additional resources from the agricultural sector by monopolizing domestic trade in food and by keeping the farm gate prices low. Again, the funds extracted from farmers in this way would be channeled to consumers without being reflected in the budget. While in principle the government can assess the value of such funds and account for them in the budget, it may choose not to do so in order to avoid pressures that the publicity of information may create for using the funds elsewhere in the budget. In this sense, such EBFs can be viewed as mechanisms that the government uses to commit to a given expenditure.

While the above three reasons motivate governments to establish EBFs, such mechanisms are not necessarily the best arrangement for achieving the intended goals. EBFs cause a number of problems that can undermine fiscal discipline and efficiency:

- (i) Since EBFs are not compared with other expenditures in the budgetary process, their social return is likely to be different from the rest of budget. Although protecting EBF expenditures may be intentional and the government may presume that the normal budget procedures are inefficient, avoiding direct comparison between EBFs and the rest of the budget may hide other grave misallocations. For example, hiding a subsidy through an EBF mechanism deprives the policymakers of making choices about the subsidy that may enhance efficiency. If complete information about the subsidy becomes public, even the recipients of the subsidy may prefer a different allocation of public funds in place of the benefits they enjoy via the EBF.
- (ii) EBFs have the potential to create liabilities against which the government may not be able to appropriately insure itself because of the off-budget nature of the expenditures. For example, as in many budgetary items, those in charge of an EBF may start spending based on their estimated revenues and later on find out that the actual revenues are far short of the estimate. If such

contingencies and activities are not considered and monitored by the budget process, the government may be caught by surprise. Another example is when public enterprises act as EBFs and the politicians find it convenient to use them as a source of off-budget borrowing to fund their favorite activities. If the indebted enterprises turn insolvent, then the government becomes liable for their loans without having made appropriate provisions. Indeed, such a phenomenon has been a significant factor behind the debt crises in Brazil [1982] and Iran [1993].

- (iii) Since EBFs are often more discretionary than the rest of the budget, politicians have an incentive to channel more public resources toward such funds. This incentive increases the pressure on the expansion of total expenditure and on deficit financing. Observations from around the world support this view. For example, in the 1980s when the Turkish government managed to set up a host of EBFs and spend public resources without prior legislative authorization, it reduced taxes in some areas (for example, by reducing tariffs in the name of trade liberalization) and then imposed new earmarked taxes on the same bases to fund EBFs. The result was that in the late 1980s, EBFs absorbed about half of all government revenues! This phenomenon contributed to the continuation of large budget deficits, which became the main force behind high inflation rates in Turkey (Önis and Webb, 1994). As part of its reform attempts, Turkey has been eliminating EBFs. Complete removal of EBFs has been an integral part of New Zealand's exemplary fiscal reforms (Campos and Pradhan, 1996).
- (iv) The diminished transparency of EBFs and the weaker checks and balances that apply to them create greater opportunities for corruption and misuse of public funds. Iran's extensive experience with EBFs provides numerous examples of such corrupt practices that have come to light, some ending in courts and conviction for the officials involved. Tehran's former mayor, Gholam-Hosseini Karbaschi, and several of his associates ended up in jail in 1998 due to the discretionary use of funds generated through enterprises linked to the mayor's office. Although the case was widely believed to be politically motivated, there were evident cases of misappropriation to which the defendants pleaded guilty (*The Economist*, April 11, 1998). A more dramatic example is the case of more than a hundred enterprises established around the Ministry of Intelligence that proved quite successful in gaining control of parts of domestic and foreign trade, largely due to the power and position of the Ministry. In late-1999, the government decided to dismantle most of those enterprises after some of the Ministry's staff, who were associated with the enterprises and had control over their funds, were found to have masterminded a chain murder of dissidents.
- (v) EBFs may reduce the ability of the government to respond to fiscal shocks. When shocks to the economy reduce government revenues or create expenditure needs, the presence of EBF reduces

the revenues and expenditures that can be adjusted through the normal budgetary process. As a result, the burden of adjustment on the items within the budget will be larger and the government finds it necessary to run larger deficits and to respond more gradually. For example, in Iran where hidden subsidies absorb a significant portion of the public funds, fluctuations in oil revenues have given rise to major ups and downs in total spending and deficit.

Given the considerable hazards of EBFs, it is imperative for the governments to seek alternative means of reaching the goals for which EBFs are created. Streamlining the budget by separating self-contained parts may be useful, but any public economic activity has potential liabilities for the government that must be properly assessed. For this reason, it is important for the policy-makers to have an opportunity to consider all aspect of public activities. Also, to the extent that flexibility in the budget is a desirable characteristic, budgetary rules and procedures must be reformed to reach such an outcome within the budget, rather than outside it. Any discretionary or emergency fund needed for ensuring flexibility or for dealing with contingencies can be part of the budget, unless the government wants to obscure the size of the fund and avoid transparency. Finally, while using EBFs to shield expenditures may be a means of commitment, protecting expenditures and making commitment in this way are undesirable fiscal goals because they can cause gross inefficiencies and undermine budget discipline. For example, as we show in the case of Iran, shielded food subsidies can rise fast when the government keeps food prices constant in the face of high inflation, increasingly channeling the foreign exchange resources that can support production and employment toward consumption. A government may want to use such arrangements to buy political peace, but that reflects basic institutional failures in solving political problems rather than prudent fiscal decision-making.

The above taxonomy of EBFs and their effects and pros and cons provides clues about why some governments resort to EBFs more than others and how the incentives of public officials may be modified to encourage more transparency and rationality in the fiscal system. The existing literature is unusually thin on these issues. The main idea examined in some detail is that restrictions on public expenditure and budget deficit induce governments to resort to more off-budget activities. Empirical investigation of this hypothesis in the case of U.S. states and IMF/World Bank adjustment programs has proven supportive (Joulfaian and Marlow, 1991; Easterly, 1999). More recently, Esfahani and Kim (2000) have empirically investigated the role of a number of other factors in the government's incentive to hide its liabilities in panel of developing and developed countries. They find that higher levels of hidden debt are associated with less checks and balances and weaker rule of law, greater dominance of the legislature over the executive, and more market distortions, especially when the economy is more complex. These findings indicate that governments tend to use EBFs as a way of avoiding legislative constraints. They also show that governments are more likely to generate off-budget liabilities when the creation and enforcement of

rules are less orderly and greater opportunities for extra-budgetary activity are created by extensive interventions in a complex economy. Below, we will examine the relevance of these observations in the case of Iran and explore in more detail the reasons for the widespread use of EBFs in the country. This will be done after we assess the role of EBFs in Iran's public finances in section 3.

3. The Nature and Size of Extra-Budgetary Funds in Iran, 1963-1997

During the last several decades, the government of Iran has become increasingly involved in all types of economic activity, both as a regulator and a producer of goods and services. In many cases, the government's involvement has been through budgetary means (e.g., provision of services such as education and infrastructure). However, a great deal of intervention has also been applied through extra-budgetary mechanisms. At the center of these mechanisms are price and quantity controls in three key markets: credit, foreign exchange, and fuel. By using its ownership rights and regulatory power, the government keeps the prices in these markets low and rations their available resources. This provides the government with enormous funds to reallocate toward goals that are fiscal in nature. Part of the rents generated by the system is distributed directly to consumers in the form of implicit subsidies on "essential goods" such as food and energy. The rest is rationed by bureaucratic units and committees through a process that is separate from that of the budget and has no auditing and accountability mechanism.

In the competition over the rents of rationed resources, a multitude of enterprises under the supervision of the Supreme Leader and those attached to government entities, especially the military and security establishments, have the upper hand. Such enterprises provide services and funds to the politicians supervising them, though their activities are in many cases unrelated to the tasks of the government entities to which they are attached. The main function of these enterprises is to enable the politicians to offer rewards to their personnel and constituency and carry out tasks that are not feasible through the normal budgetary processes.³ As a result, the enterprises enjoy support from the bureaucracy and have privileged positions vis-à-vis private firms (except some private firms with sufficient political connection). The administrative rules also favor them in their access to credit, foreign exchange, regulatory permits, and government contracts.

³ The evidence concerning these characteristics of the public sector in Iran is scattered in the newspapers in recent years. A good example is the interview of Ahmad Rasoulinejad, a conservative parliamentarian, with *Asr-e Azadegan* (December 6, 1999) in which he describes the use of off-budget activities by public officials to build political and economic base for themselves. Nili (1997) and Tabibian and Habibi (1995) discuss these issues based on their experience in the Plan and Budget Organization of Iran.

Since the sources of funding for extra-budgetary activities are largely the rents generated in the credit, foreign exchange, and energy markets, below we focus these markets in more detail, followed by a discussion of other market interventions. We also estimate the size of EBFs that these markets provide for the government.

3.1. Credit

Intervention in the credit market in Iran is through government controls that allocate credit at below market-clearing interest rates. Part of this credit allocation is the government's own borrowing from the banking system to finance its deficit, which is included in the budget accounts. However, as the regulator and owner of the banking system, the government uses its monopoly power to direct credit toward sectors and enterprises that it wants to promote. Such implicit taxation and subsidization are in essence fiscal decisions, but they are not included in the budget accounts. To be exact, there are notes in the budget law that authorize the government to use banking resources for supporting certain activities. But, there is no proper assessment of the true size and costs of the resources reallocated in this way. As a result, the implications of these funds for budget discipline and allocative efficiency remain vague.

An important feature of the off-budget use of credit resources is their bypass of the normal budgetary checks and balances. The consequence is that many recipients of the subsidized credit (most commonly para-statal enterprises) do not necessarily use the loans efficiently and frequently face insolvency problems that are resolved by passing on the debts to the government (Roghani-Zanjani and Taheripour, 1997). This fact is reflected in the first two columns of Table 1, which compare the annual change in government debt with the budget deficit, both as percentages of nominal GDP. If there were full accounting for the debt and the deficit, no EBF debt creation mechanism, and no foreign aid, then the increase in public debt in a given year should be exactly equal to the budget deficit in that year (i.e., column 1 should be equal column 2). To the extent that the deficit is financed by foreign aid, the debt increase should be less than the deficit and to the extent that the government assumes debt outside the budget, the debt increase should exceed the deficit. There have also been some carryover and government bond sales that are not included in the available public debt data, though their effects are included in the budget deficit. The carryover shifts the deficit between years and the bond sales lower the measure of debt increase. We do not have direct data for these effects, but the budget items that include them are small. Before 1979, the debt increase was almost always less than the deficit because foreign aid covered part of the deficit. However, in most years after 1979, and especially since 1993, debt increase has exceeded budget deficit by a large margin. For all these years, the government has been assuming debt outside the budget. Since in this period there has been no foreign aid and the carryover and bond sales have been small, the amount of extra-budgetary debt assumption in each year is essentially the difference between

the debt increase and the deficit in that year. For the years when the debt growth has been less than the deficit, there may also have been some extra-budgetary debt increases that have been offset by bond sales and carryovers, but the amounts must have been insignificant. Therefore, we can estimate the rate of extra-budgetary debt accumulation by the excess of the debt increase over the deficit whenever the difference is positive and zero whenever it is negative. The result of this calculation is shown in column 3.

The extra-budgetary debt growth reflects the realization of the actual and contingent liabilities of the government, which has been largely due to the default of public enterprises on their loans. Obviously, if the original credit allocation had been viewed as government borrowing and the contingent liabilities had been estimated and included in the budget in earlier years, the picture of public spending and deficit would have been very different. If one adds the extra-budgetary borrowing in column 3 of Table 1 to the budget deficit in column 1 (both as percentages of GDP), it becomes clear that the true deficit as a share of the official GDP was between 5% to 10% during 1979-1988 and has been hovering around 5% ever since rather than declining toward zero.⁴

The interest ceiling on directed credit offers another source of EBF for the government. The actual interest paid by the borrowers varies and there is no systematic data on the rates paid. However, the available data on interest ceilings indicate that the real cost of borrowing must have been significantly negative in almost all years during the past three decades (see Table 2). Based on the data in Table 2 and credit allocations during 1975-1978, Salehi-Isfahani (1989) estimates the implicit credit subsidy in that period to have ranged from 46% to 66% of the market interest rate. Expert views suggest that the latter figure is closer to the subsidy rate after 1979.

Because of usury laws, no estimate of free market interest rate is available since 1979. Also, there is no data on the volume and interest details of the loans paid out by the banking system. However, it is possible to use the available casual information to come up with a rough estimate of the size of EBFs created through government controls over the banking system. To construct an approximate free market nominal interest rate series, we assume an average real interest rate of 3% per year and add it to the rate of inflation. We then let the subsidy component of the credit directed by the government to be 2/3 of this nominal interest rate (see the fourth column of Table 1). This figure may be an overestimate of subsidy for the pre-1977 period, but as the last column of Table 1 shows, even with this overestimate the credit subsidy is relatively small when compared to the later periods because prior to the mid-1970s, both

⁴ Note that the spikes in debt change (e.g., in 1986 and 1993) reflect the times when the government has come to acknowledge the liabilities accumulated in previous years. Therefore, the average rate of debt accumulation over several years is more meaningful than the specific level of debt increase reported in each year.

interest rates and credit volumes were generally low. For the year following the Revolution of 1979, the assumed real interest rate may be an underestimate. We choose this rate to be on the conservative side and compensate for possible overestimation in our other assumptions. It should also be pointed out that the sensitivity of the results with respect to the assumed real interest rate is rather low. Changing the real interest rate by one percentage point changes the size of interest subsidy EBF after 1977 by about 0.4% of GDP, which is small relative to the overall size of the credit-based EBFs and does not make much difference in the general conclusions of this paper.

For the volume of credit to which the interest subsidy applies, we use the total debt of the government, public enterprises, and the private sector to the banking system. This is because all bank lending is subject to interest ceilings and the entire public enterprise borrowing and the overwhelming majority of private sector borrowing is under some form of government rationing. The last column of Table 1 shows the end result of our calculations.

To sum up, interventions in the credit market has created substantial extra-budgetary funds for the Iranian government. As the third and fifth columns of Table 1 show, these funds have been increasing in significance through time and have reached phenomenal proportions in recent years. Through debt assumption and interest rate ceilings the government has managed to reallocate on average about 13.5% of GDP during the last two decades. The corresponding numbers for the 1960s and 1970s are 1.3% and 3.8% of GDP.

3.2. Foreign Exchange

Allocation of foreign exchange at below market prices has been one of the largest sources of extra-budgetary funds in Iran. The government controls the bulk of foreign exchange supply in the country through its dominant role in foreign borrowing and its ownership of oil, which typically supplies over 80% of Iran's export revenues. Under current procedures, the government sells its foreign exchange revenues to the Central Bank at the basic official exchange rate and includes the rial equivalent in the budget as oil export proceeds. A similar procedure is used for foreign borrowing, which is reflected in the budget as part of "revenues from foreign exchange sales," even though it is in fact a source of deficit financing.⁵ The Central Bank uses part of the foreign exchange to cover the country's external obligations

⁵ These liabilities are later on paid off with part of oil revenues in the following years, with the remaining oil revenues being reported in those years. In effect, the government considers foreign borrowing as part of its future oil revenues and brings those revenues to the current year. This procedure is supposed to smooth out income and deficit over the years. However, as discussed in section 4, the early 1990s when the government first used this procedure, it

and sells the rest to public agencies and private enterprises to meet their demand for imports. The sales and payments of foreign exchange by the Central Bank are recorded in its receipts at the basic official exchange rate. But, part of the foreign exchange sold domestically is actually transacted at other official rates that exceed the basic one. The excess proceeds from these transactions are transferred to the Treasury and enter budget accounts as another part of "revenues from foreign exchange sales." Although the other official rates are higher than the basic one, they are still far below the one prevailing in the free market. Table 3 compares the average official exchange rate transacted by the Central Bank—which is reflected in the budget accounts through proceeds of oil and foreign exchange sales—and the free market rate used in unofficial transactions. It is evident from the table that since 1979 the implicit subsidy on foreign exchange sales has been phenomenal.

The foreign exchange subsidy in Iran is an EBF because there is enormous excess demand for foreign exchange and the amounts sold in the domestic market are mostly allocated by the government. When the government permits a domestic entity to purchase foreign currency from the Central Bank, it is implicitly transferring large amounts of exchange rate subsidy to the recipient without recording it in the budget. This enables the government to treat foreign exchange allocations as a key policy tool for reaching political and economic objectives, just as any budgetary resource would be used. Indeed, for some years during the 1980s the government had a separate "foreign exchange budget," which went through the legislative process along with the main budget document. However, due to large and unpredictable fluctuations in external revenues, the foreign exchange budget was difficult to implement and the government ended up with a great deal of discretion in implementing it. In the early 1990s, the foreign exchange budget was abandoned and the government's discretion became formal. Ever since, a council consisting of high-level government officials is in charge of allocating foreign exchange.

To estimate the size of the EBF based on foreign exchange subsidy, we apply the subsidy rate shown in Table 3 to the country's total import bill less non-oil exports. To calculate the subsidy rate, we assume that the equilibrium exchange rate that would have prevailed if the government had sold its foreign exchange in a competitive market, other things remaining equal, would have been the average of the official and the unofficial free market rates.⁶ We believe that this is a very conservative assumption

borrowed at a time of high oil revenues and ended up showing a much larger debt increase in the mid-1990s when payments came due while oil revenues were falling.

⁶ Calculating counterfactual equilibrium exchange rates is no easy task. A theoretically rigorous way to approach the problem would be to build a general equilibrium model of the economy with the foreign exchange controls and then simulate the outcome without them. A simpler approach would be partial equilibrium modeling, where one estimates the equilibrium exchange rate based on demand and supply elasticities and the amounts of distortion caused by the foreign exchange rationing. Even this simpler technique is highly data intensive and excessively time consuming for the purposes at hand. Another method that has been proposed for such purposes is the purchasing power parity

and adopt it to show that even with such an assumption, the size of EBFs is amazingly large. We provide alternative estimates in the Appendix based on the assumption that the equilibrium rate is equal to the free market rate to show that the results would be stronger under that assumption, but the main trends remain unchanged. Our sense is that the free market rate itself offers a reasonable approximation to the equilibrium rate because the impact of removing government controls on the exchange rate through supply and demand channels were likely to work in a neutralizing fashion. While the supply of foreign exchange in the free market would have expanded very sharply, the demand would have also gone up by the existing recipients of rationed foreign exchange as well as many others who do not participate due to the difficulties in arranging unofficial transactions and in using the purchased foreign exchange to import goods. In any event, in the following we focus on the more conservative assumption, which still makes the point about the role of EBFs in Iran.

The use of imports less non-oil exports as the amount of foreign exchange allocated by the government is because all the foreign currency that the Central Bank sells ultimately shows up in the import bill. But, the import bill also includes the foreign currency that exporters of non-oil products earn and are typically allowed to use it toward imports of their own. While the procedures for non-oil exports often impose implicit taxes on them that become part of the foreign exchange EBF, the amount is a very small part of the EBF and we ignore it here to keep our estimates simple and on the conservative side. The import bill also includes some private capital inflows, for which no reliable data is available. However, by all indications, the share of that part in total imports is quite small anyway. In Iran, private capital outflows practically cancel out private capital inflows.

The last column of Table 3 shows that even under our conservative assumptions the size of the foreign exchange subsidy relative to the official GDP has been extremely large since 1979, mainly because of the substantial overvaluation of the official exchange rate. (Scaling by the official GDP is simply for comparison purposes.) As we argue below, the omissions of EBFs from budgetary calculations lead to underestimation of the actual GDP as well. Therefore, the share of EBFs in the adjusted GDP is smaller than what the tables indicate. Nevertheless, as we will see, even with that adjustment the sizes of these funds remain quite impressive.

approach, which posits that the relative amounts of goods that a dollar buys in two countries should be constant (or at least predictable based on some economic fundamentals). Under this method, one finds the equilibrium exchange rate as the ratio of price levels in the two countries, multiplied by some predetermined factor. Unfortunately this method is not applicable in the case of Iran because it assumes the price levels in both countries are market determined, while the prices for many of the items used in Iran's price index are set by government fiat and do not necessarily reflect market forces. For these reasons, we use two estimates that roughly define the boundary of possible outcomes to determine the range of the foreign exchange EBF.

3.3. Domestic Oil Sales

The prices of oil products in Iran have little connection with their international prices. In 1964, in response to a budget crisis, the government sharply raised the domestic fuel prices while the export price of crude oil was falling. The same nominal domestic price was then practically maintained as the international crude oil prices fell in the 1960s and, then, sharply rose in the 1970s. As a result, the domestic price of crude oil that had been above that in the international markets in the second half of the 1960s fell far below it by the late 1970s. Since 1979, the implicit subsidy on crude oil has grown truly large and has become one the most significant sources of distortion in the Iranian economy (Salehi-Isfahani, 1996). As we show here, the subsidy has also become the largest EBF in the country during the last several years. By selling crude oil essentially for free in domestic market, the government provides an immense subsidy without even mentioning it in the budget.

Calculating the exact extent of oil subsidy is cumbersome because domestic price of crude oil must be implicitly derived from the prices of oil products minus processing and distribution costs, for which time-series data is not readily available. However, there is a consensus both inside and outside the government that in recent years the domestic prices of oil products barely cover the processing and distribution costs and the implicit price of crude oil in domestic markets is essentially zero (Salehi-Isfahani, 1996). For example, in 1998, gasoline was the most expensive oil product and was sold for 200 rials per liter, which at the prevailing free market exchange rate, 5,600 rials/US\$, was equivalent to $\text{¢}3.6$ per liter ($\text{¢}13.5$ per gallon). This price hardly exceeded the oil processing and distribution costs in Iran.

Based on the above view and using the available wholesale fuel price index in Iran, we construct a series for the implicit price of domestic crude oil sales. For this purpose, we assume that the real processing costs had remained unchanged for the entire period and that this cost equaled the average price of fuel sold domestically in 1990. We choose 1990 as a year in which the domestic price of crude oil was zero because in that year the real domestic fuel price index reached its minimum and we want to ensure that the implicit crude oil price always remains non-negative so that our estimates remain conservative. The third column of Table 4 shows the nominal fuel-processing cost index, which we construct by assuming that its unit cost index has been equal to the GDP deflator and by scaling that series to set the total cost index equal to 100 in 1990. Subtracting column three from column two yields a price index for the domestic sales of crude oil (see column four of Table 4). Dividing this index by the equilibrium exchange rate discussed above produces a new price index in terms of US dollars for the domestic sales. The new index makes the trends in the domestic price of crude oil comparable with the international one, but still prevents us from making a levels comparison. To overcome this hurdle, we assume that the

adjustment in 1964 had equalized the domestic and foreign prices of crude oil.⁷ This means that if we scale the index in column four such that it equals 2.09 in 1964, the result would be the US dollar price series of a barrel of crude oil sold in domestic markets, shown in the fifth column of Table 4. Comparison of this series with the price series for oil exports allows us to calculate the implicit subsidy on domestic crude oil (see the six column of Table 4). We use this rate to arrive at the total value of the oil subsidy by multiplying it by the value of domestic crude oil sales evaluated at the export price with the equilibrium exchange rate. For the years when the domestic price exceeds the international price, the subsidy fund is equal to zero because all the additional energy revenues are reflected in the budget as income.

Note that we are assuming that the crude oil used domestically could have been sold in international markets at the average export price shown in Table 4. This is a reasonable assumption, especially at the margin because the international oil market is quite large relative to Iran's domestic oil consumption and the OPEC quotas, when they have been effective, apply to total production, not exports. Moreover, OPEC quotas have not been binding for Iran due to limitations in production capacity (Salehi-Isfahani, 1996). Even if OPEC quotas were binding, having a larger *surplus for exports* would have allowed Iran to bargain for a larger quota, which is the reason why Kuwait and Saudi Arabia receive large quotas. Besides, oil can be left in the ground to be sold in tighter world market conditions. Therefore, its opportunity cost is ultimately the international price. Certainly, the substantial increases in domestic oil demand (see below) could have been curbed to leave more oil for exports and for pushing Iran's OPEC quota higher if necessary.

The last column of Table 4 shows the value of the oil subsidy relative to the official GDP calculated based on the above assumptions. The results show that since 1979 the size of oil subsidy has been staggering and may even seem incredible. But, this fact is difficult to escape because we have tried to keep our estimate on the conservative side. Appendix Table A1 shows that using the free market exchange rate as the equilibrium yields a more astounding subsidy volume. As in the case of other EBFs, adjusting the GDP estimates indicates a lower, but still impressive, share of the oil subsidy in the economy.

The contrast between the huge subsidization of domestic oil since the 1970s and its high price in the 1960s is very interesting and largely unnoticed in the literature on the Iranian economy. The consequence of this shift in policy can be easily seen in the trends in oil consumption inside Iran. While in the early 1960s, the share of domestic consumption in the total production of oil was about 25%, it

⁷ Whether the domestic price in 1964 was somewhat below or above the international price does not change our results because it has little effect on the conditions after 1974 when fuel prices were not far away from processing costs and subsidization was not much of an issue before that anyway.

declined to 10% in the early 1970s and then climbed back to over 35% in the mid-1990s.⁸ This trend is not a matter of changes in the production rates. In particular, since 1989 production has been fairly steady, but the share of domestic consumption of oil has climbed up, even after 1993 that the domestic economy has been mostly stagnant. The ratio of oil consumption over real non-oil GDP, which had been falling at rates of over 5% per year in the 1960s and 1970s, has been rise since the 1980s at an average rate of almost 6% per year. This change of trend has a great deal to do with the extreme oil subsidy in Iran that has strongly stimulated the domestic demand. Certainly, the trend cannot be due to external factors or technological shocks because in the rest of the world, energy use per dollar of GDP has been declining during the same period despite generally low oil prices in international markets. In 1997, Iran's energy consumption for each (purchasing-power-parity) dollar of GDP stood at 0.34 kg of oil equivalent, which was higher than most other countries except those of Eastern Europe and a few others. The weighted average of the same measure for the Middle Eastern countries was 0.29 kg/\$, for Latin American countries, 0.17 kg/\$, and for high-income OECD countries, 0.22 kg/\$.

The comparison of recent trends with those in the 1960s has an important policy implication because it casts doubt on the woes of inflation and stagnation in response to fuel price adjustment in Iran. The fact that the price jump in 1964 was followed by several years of high GDP growth and negligible inflation shows that there are practical ways to manage the adjustment successfully.

The sharp rise in the amount of domestic oil subsidy since the 1970s is a combination of several factors. The government has been keeping nominal fuel prices low inside Iran to maintaining real incomes, especially those of the poor. At the same time, the enormous overvaluation of the official exchange rates after 1979 has meant that the rate of subsidization has been almost 100% since then. Cheap energy has, in turn, induced rapid increases in domestic demand for oil. It is the opportunity cost of this oil that funds the massive extra-budgetary energy subsidy.

3.4. Other Market Interventions

Besides controlling the prices and quantities in the credit, foreign exchange, and oil market, the government of Iran engages in a host of similar controls in other markets. For example, the government maintains a monopoly over wheat trade and has systematically kept the domestic wheat prices below those in international markets. Such interventions are too numerous to examine individually. But, they

⁸ This data is based on the PDS databank compiled by the Institute for Research in Planning and Development, Tehran, Iran. The cross-country data presented in the rest of the paragraph comes from the World Bank's *World Development Indicators*, 2000. See also Salehi-Isfahani (1996) for further discussion and evidence on the pattern of energy consumption in Iran.

generally have an important characteristic that makes separate calculation for them unnecessary. Most of those interventions are essentially controls placed on the market to pass on part of the credit, foreign exchange, and oil subsidies to the buyers of the final products. For example, the agricultural price controls are matched with farm input subsidies through cheap credit, foreign exchange, and fuel that compensate farmers and maintain agricultural production incentives, as evidenced by the relatively healthy performance of that sector. Similar input subsidies paid to industries are accompanied by output price controls that keep the prices low at least for some of the customers. Thus, the redistributions through these types of intervention are not new resources being controlled by the government. They are simply parts of the EBFs based on credit, foreign exchange, and fuel controls, which we have already estimated.

3.5. Adjustments in GDP Accounts

The interest rate and price controls in Iran lead to under-valuation of products and resources in the GDP accounts. When the government provides subsidies, in official GDP accounts it essentially measures the price of the output net of those subsidies. In the case of oil subsidy, this is done automatically because there is no supply shortage and the low price is reflected in low value of final sales of energy or low cost of production and low prices of others good. For credit and foreign exchange subsidies, the direct recipients of the allocations could capture the subsidies if they were allowed to sell their products in free markets. But, in practice, the government imposes controls on sales and keeps the final prices low. Even when part of the output that is sold at a premium in unofficial or free markets, the national accounts typically apply the official prices. As a result, nominal GDP figures exclude the bulk of the resources redistributed through credit, foreign exchange, and oil subsidies.⁹ To adjust the nominal GDP figures and make them consistent with our budget estimates, we add the values of exchange rate, domestic oil, and interest rate subsidies net of interest differential directly captured by the government to the official measure of GDP at market prices. Note that the interest differential that directly goes to the government is a transfer and, therefore, should not enter GDP calculations. But, the interest subsidies to private and public firms should be added to the official GDP because, to the extent that the interest subsidy keeps the cost of production down, the government tends to lower its estimate of output values. The same applies to the oil subsidy, which represents a government-owned resource that is highly under-priced in GDP accounts.

⁹ Note that in the case of foreign exchange subsidy, the underestimation of output value is matched with the under-valuation of imports and, one might think that there should not be any adjustment in the GDP calculations. However, oil exports are also undervalued by exactly the same amount. As a result, the EBF arrangements for foreign exchange ultimately lead to underestimation of GDP by the amount of foreign exchange subsidy.

The consequences of the above adjustments in GDP can be seen in Figure 3 where we show the ratio of official to adjusted current-price GDP. The official data series is practically equal to the adjusted GDP measure in the 1960s because the only adjustment at that time was a limited interest subsidy. In contrast, after 1970 the official figures started to fall short as the oil subsidy entered the picture and the interest subsidy expanded. This underestimation became quite severe in the 1980s and 1990s because the value of oil subsidy rose sharply while the non-oil economy contracted substantially. Also, nominal interest rates were kept low as inflation soared. Our estimation indicates that since 1979, about 30 percent of Iran's GDP has been left out of the official accounts. This should not come as a surprise given the large resource transfers through hidden subsidy mechanisms. However, it should be kept in mind that our adjustments are on an opportunity cost basis and do not necessarily imply a commensurate adjustment in any index of economic well being based on GDP because the public is likely to have valued the subsidies far below opportunity cost. In other words, the adjustments do not account for the deadweight losses of government interventions. Rather, they reflect the surplus that the public could have enjoyed if those EBF resources had been applied to their best alternatives.

3.6. Adjusted Size of Government and Budget Deficit

Figure 4 compares the adjusted government expenditure-GDP and deficit-GDP ratios with the official ones. The adjusted government expenditure consists of the official values plus the oil, credit, and foreign exchange EBFs. The adjusted deficit is simply the official deficit plus the excess debt accumulation given in Table 1.¹⁰

Until the mid-1970s, the pictures depicted by the adjusted and official expenditure and deficit ratios are essentially similar, but the two pictures diverge drastically after that (Figure 4). The adjusted expenditure-GDP ratio shows that the actual size of government in Iran during the past two decades has on average been well over 50% of GDP, which is the opposite of what the official data indicate. Even in the 1990s when the size of government declined somewhat, it remained about 50% of GDP. This conforms much better to the image commonly held about Iran during the last two decades: a country with an omnipresent government distributing its vast oil revenues in an otherwise impoverished economy. The adjusted figures also clearly reflect the impact of economic liberalizations initiated under the First Five-Year Plan, which was launched in 1989 following the end of the war with Iraq. This clarifies the unrealistic perspective provided by the official data that suggest that the government was quickly shrinking in size during the war and that the First Plan reversed that process.

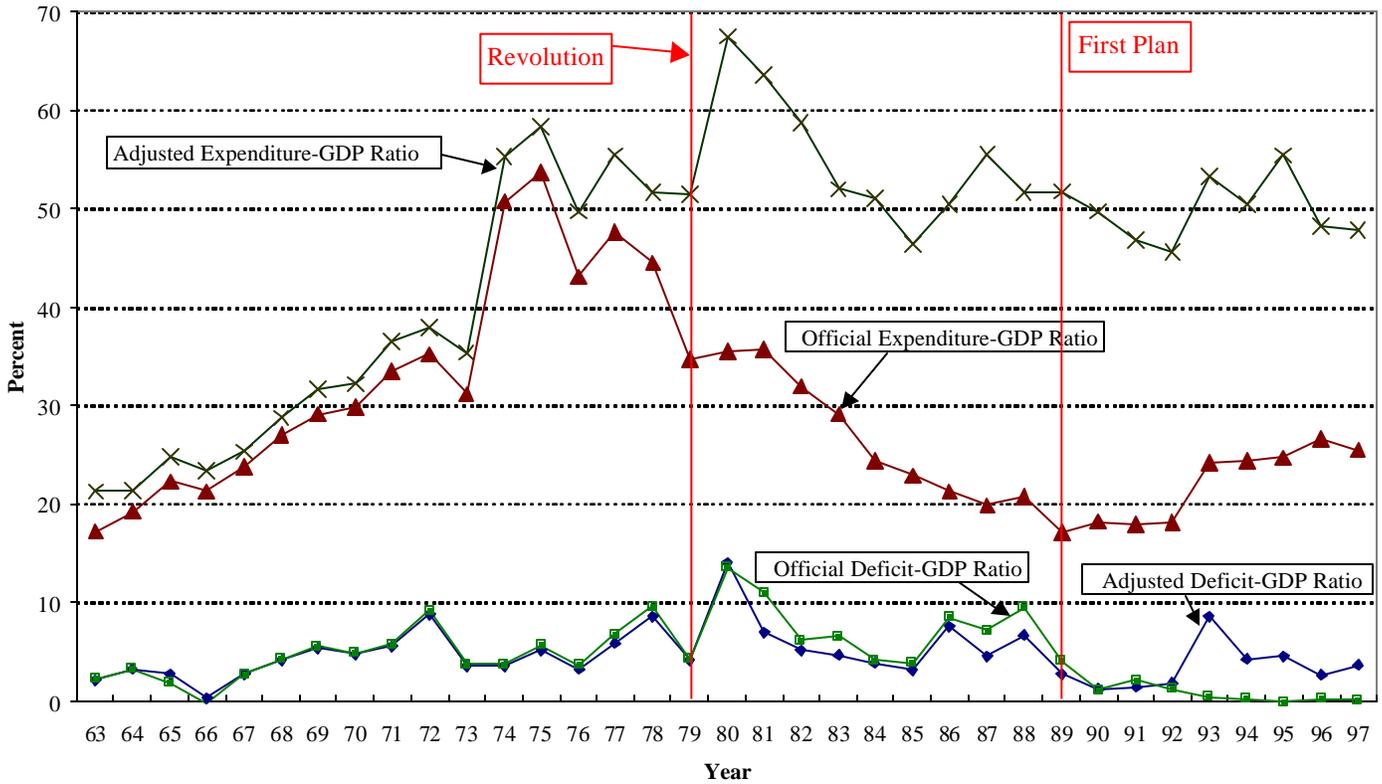
¹⁰ Note that the subsidies mean that government purchases are also subsidized. But, we do not need to make any adjustment for that effect because the differential is already included in the EBF accounts.

Figure 3
The Ratio of Official to Adjusted GDP



Source: Computed.

Figure 4
Government Expenditure and Deficit
Official and Adjusted Values



Source: Computed.

Our calculations indicate that the budget deficit-GDP ratio has averaged 4.9% of GDP over the past two decades and has hovered around 4.5% of GDP during the past several years. Interestingly, the official data understate the significance of the budget deficit mainly during the 1990s, as Figure 4 shows. For the 1980s, there is a discernible overestimation. Although the government has been underestimating the absolute value of its deficit, it has been underestimating GDP by a larger percentage, making the deficit-GDP ratio appear too high. This was not the case during the 1990s because the deficit largely took the form of debt assumption, which was kept outside the budget and was substantial. As a result, while the official data suggest a disappearing deficit, the adjusted figures reveal a large and persistent fiscal imbalance. Since much of government debt in Iran has been eventually monetized, these deficits have played a key role in economic instability in the country.¹¹

4. The Political Economy of Extra-Budgetary Funds in Post-Revolutionary Iran

The above findings suggest that the government budget in post-revolutionary Iran has been quite large and has contained massive resource redistributions through EBFs, which by all indications entailed a great deal of inefficiency. By looking at phenomena such as the almost 100% subsidy on crude oil and the highly inefficient rise of oil consumption, it is easy to say that the government should reduce its interventions substantially. However, to provide an effective solution to the problem, one needs to ask why the government conducts its policy in such inefficient ways? Why does the government allocate credit, foreign exchange, and oil resources through EBFs? Wouldn't the policymakers and the public be able to do better if the EBFs were explicitly measured and included in the decision about the allocation of all public resources through the budget process? To answer these questions, in the following we first ask what purpose does each type of EBF employed by the government serve? Does the extra-budgetary status of those funds help streamlining, commitment, or flexibility? We then explore the factors that may account for the policymakers need for achieving such objectives through inefficient extra-budgetary mechanisms.

The taxonomy of EBFs discussed in section 2 suggests that the rationale behind the EBF arrangement for the oil subsidy may be streamlining or commitment to the expenditure. Of course, if the government is already committed to pay the subsidy, then the EBF can obviously streamline the expenditure because instead of assessing the opportunity cost of the oil, accounting for the consequent profits in the budget, and then returning part of those profits as explicit subsidy, the government simply

¹¹ Despite years of persistent large deficits, in 1996 the ratio of public debt to GDP stood at about 23.4% by the official data and at 16.2% by our adjusted estimates. Monetization has been continuously eroding public debt since the 1980s.

instructs the National Oil Company to charge a low price and declare a low profit. On the other hand, if commitment is not an issue, it makes a great deal of sense to include an estimate of the value of the domestic oil consumption in the budget and then decide how much of that should be paid as subsidy and how much should be used for other purposes. The administrative burden that this would add to the current, often quite contentious, debates over fuel prices in the government and in the parliament would be minimal. Therefore, the main reason for keeping the subsidy out of the budget appears to be commitment. The focus of policymaking in this respect is the direct impact of the price on the real incomes of different groups and the political legitimacy that it buys, rather than the overall benefits that the gigantic subsidy funds can bring about if they are put to alternative uses.

Part of the foreign exchange EBF has the same characteristics as the oil subsidy. A large amount of foreign exchange is used for imports of wheat and other products deemed essential, all of which are sold at highly subsidized prices. As in the case of oil price, the focal point of policymaking is the politicized consumer price (e.g., the price of bread) rather than the amount of budgetary resources employed to achieve a particular goal. In these cases, again the policymakers have maintained an inefficient policy as a means of commitment to redistribution. They seem to be hesitant to disturb a political equilibrium built on the exchange of subsidies for political legitimacy.

In contrast to the resources committed to imports of "essential goods," the rest of the foreign exchange subsidy and the credit subsidy represent highly discretionary EBFs. The allocation of these resources occurs mostly during implementation and free from budgetary rules and supervision. There is obviously no commitment in this case. Streamlining also cannot be the purpose of such arrangements because the allocations are by no means straightforward and automated. Therefore, gaining flexibility appears to be the main motive for these EBFs. Yet, one may still wonder whether the discretion over such funds is established by choice or has it come about by necessity. As we have mentioned earlier, the extreme fluctuation in the oil export revenues may have rendered the contingent allocation of part of government funds too costly to specify and allocate within the budget. This phenomenon obviously does not apply to the credit-based funds because their supplies are more stable and under tight grip of the banking system, which is entirely controlled by the government. However, even in the case of foreign exchange resources, instability of revenues cannot by itself be the reason for leaving them to off-budget discretion. A well-known remedy for revenue uncertainty is to smooth out the expenditure of foreign exchange proceeds through a stabilization fund, as many countries facing high fluctuations in their external markets do. Kuwait, for example, has managed to successfully stabilize its fiscal conditions by investing part of its oil revenues in a diverse international portfolio whose returns are inversely correlated with the price of oil. As a result, it has weathered oil price fluctuations much more easily than Iran despite

its greater dependence on oil. This suggests that the off-budget and discretionary allocation of foreign exchange in Iran cannot be simply a condition dictated by external circumstances. If anything, revenue uncertainty calls for the inclusion of foreign exchange resources into a multi-year budget system that allows long-term planning.

The government of Iran has occasionally used the stabilization fund option in the past, though in limited ways. In the aftermath of the 1973 oil-price hike, the government invested part of its foreign exchange earnings abroad. However, in more recent times it has done the exact opposite. For example, in the early 1990s when oil prices rose for a while, it became easier for the government and businesses in Iran to borrow in international markets. Para-statal enterprises in particular took advantage of their extra-budgetary status and borrowed heavily from abroad without much restraint, generating substantial liability for the government. The process came quickly to an end when it became clear in 1993 that oil prices could not stay high enough in the foreseeable future for the government to be able to pay back all that debt. The government ended up assuming all the debt and, despite suffering from a continuing recession due to shortage of foreign exchange, the economy was forced to run a trade surplus for some years to pay back the extra-budgetary debt. The legacy of that debt crisis still haunts the Iranian economy.

If one accepts the above diagnosis of the motives for EBFs (commitment for some parts and flexibility for others), the question arises why the government does not try to reach its objectives through more efficient means? In particular, one wonders why is commitment to inefficient use of funds helps contain political discontent, while putting the same funds to better uses and enlarging the total pie does not? For the discretionary EBFs, the executive may be interested in maintaining them because it gains greater control over policy implementation. But, it is not at all clear why the legislature (Majles) prefers the existing system and does not formally allocate those credit and foreign exchange resources through the budget. The government's case-by-case decision-making seems to create serious hurdles on the way of legislative supervision and can lead to serious misallocation and corruption. Then why have the members of Majles tolerated the system?

The explanation for these puzzles may partly lie in the phenomena that tend to delay reforms. In particular, there may be a "war of attrition" effect, whereby different interest groups represented in the policymaking process engage in holdups to push the costs of policy adjustments on each other (Alesina and Drazen, 1991). Also, "individual-specific uncertainty" may discourage interest groups in giving consent to policy change if they perceive their chances of being among winners of the reform to be too slim (Fernandez and Rodrik, 1991). However, the task here is to explain how the inefficient EBF system has come about and maintained with relative consensus. At least in the past, there has not been much

contention among the leading politicians in the Islamic Republic over EBF policies and none them has shown particular keenness at reforming these aspects of economic policy.

To deal with the questions at hand, we examine the nature of post-revolutionary politics and policymaking institutions in Iran. We argue that the answers can be found in the fundamental characteristics of Iran's political economy in the past two decades: the accrual of sizable rents to the government because of its monopoly rights over oil and the dominance of a small elite that has tried to keep its ranks closed while deriving a good part of its legitimacy based on the promise of egalitarian and democratic rule (Mazarei, 1996). The elite's promise to pay attention to the poor and to popular demands has its roots in the 1979 Revolution that brought it to power with the support of a broad coalition of socio-economic groups that were unified against the inequitable and dictatorial practices of the previous regime (Mazarei, 1996; Nowshirvani, 1997). But the coalition lacked any broad-based political organization and was entirely coordinated by the leadership of a small, relatively well-organized group, which soon suppressed opposition to its rule and formed the country's new political elite (Parsa, 1989).

To fulfill the promise of egalitarian rule, the Constitution of 1979 and other conventions established in the early years of the Revolution required the government to intervene in the economy and redistribute income to ensure a minimum level of income for the poor. For this purpose, a substantial part of the economy was reserved for the public sector and the government was empowered to use market controls with little restraint.¹² With the government in control of the bulk of the economy's rents, egalitarian redistribution of income could have taken the form of subsidies on mass-consumption goods or the use of rents in productive public projects that could have created more productive jobs in the long run. The first option gave the public direct access to the rents and was quite tangible. The second, on the other hand, required building trust among the public that the resources would be invested in productive ways that would benefit all rather than being wasted or redistributed toward particular interests. This would have required substantial involvement of the public in the formation of economic policies, which was not practical due to lack of extensive civil and political organizations and the ruling elite's effort to

¹² Article 43 of the 1979 constitutions lays down the priorities of economic policy and Article 44 stipulates, among other things, that "the state sector is to include all large-scale and mother industries, foreign trade, major minerals, banking, insurance, power generation, dams, and large-scale irrigation networks, radio and television, post, telegraph and telephone services, aviation, shipping, roads, railroads and the like; all these will be publicly owned and administered by the State." On the other hand, "The private sector consists of those activities concerned with agriculture, animal husbandry, industry, trade, and services that supplement the economic activities of the state and cooperative sectors."

limit entry to its ranks. As a result, the government opted for the first alternative and committed itself to inefficient mass subsidies as a means of maintaining legitimacy.¹³

The subsidies absorbed only part of the available rents. There were other tasks to be carried out and the government held on to some of the rents for those purposes. The role assigned to the government after the revolution provided ample opportunity to turn these rents into EBFs and gain flexibility in spending them. The unsettled environment of policymaking and the failures in checks and balances and rule of law after the Revolution further facilitated the use of such options. The incentive to use EBFs was also strengthened by the primacy that the constitution gave to the legislature over the executive as a way of fulfilling the promise of democratic rule—e.g., by denying the executive any veto power and requiring it to implement the laws passed by Majles.¹⁴ This reduced the flexibility of the executive under the normal budgetary procedures and encouraged it to exercise its off-budget options. It should be noted that all these effects are similar to those that have found empirical support in the studies of other countries (Joulfaian and Marlow, 1991; Easterly, 1999; Esfahani and Kim, 2000). However, we still need one more piece of the puzzle to complete the explanation of why the legislature accepted the proliferation of EBFs.

The missing piece can again be found in the designation of Majles as the response to the popular demand for democracy. While the elite maintained effective control over all organs of the government, the debates and resource allocations through Majles were largely public and could not be used for large particularistic redistributions without endangering the revolutionary legitimacy of the regime. In this context, EBF arrangements proved quite useful for the elite because massive resources could be channeled through them without public acknowledgement. Though the arrangements were costly to the country, the elite could gain from it by limiting the information about and access to the rents. Including the discretionary EBFs in the budget would have involved a much larger part of the population in the process and would have made the allocations more transparent, both of which would have changed the distribution of benefits away from the one preferred by the ruling elite.

If our hypotheses about the roots of large EBFs in Iran are correct, resolving the situation requires greater public consciousness about the sources of the problem and the significant gains that can materialize if the EBFs are eliminated and all public revenues, expenditures, and contingent liabilities are transparently accounted for in the budget. Increased democratization is also needed to bring about better rule of law and turn this consciousness into stronger political demands for policy reform. Once the

¹³ The idea that inefficient mass distributions are the result of lack of trust between the government and the public is further developed in Esfahani (1999).

¹⁴ For a more detailed analysis of political and budgetary institutions in Iran, see Esfahani and Taheripour (2000).

decision is made to resolve the problem, the reform can start with a few straightforward acts. The exchange rate needs to be unified and credit allocation should be left to the market, with the government acting as a regulator with the right to intervene only in specific ways that are justified by clear evidence of market failure. The oil and other commodity subsidies should also be explicitly measured and be put to debate together with the alternative public projects that could be implemented with those funds. These initial steps must be followed by deeper institutional reforms to overcome the incentives to return to the current situation. These include appropriate new rules that require and enable the government to assess all its liabilities and keep fiscal information comprehensive and transparent. In addition, the reformers need to change the relationship between the legislature and the executive by providing the executive with greater power and flexibility within the law.

5. Conclusion

In this paper, we have shown that in Iran extra-budgetary funds are truly large and play significant, adverse roles in the economy. We have also shown that once the size of these funds is measured and appropriate adjustments are made in the budget and national accounts, the size of government and its deficit prove much larger than the official data indicate. The picture that emerges after the adjustments conforms well to the realities of the Iranian economy and clarifies the role of fiscal policy in its instability. The complex and hidden nature of the EBFs has made it difficult in the past for policy analysts to assess the situation more clearly and seek effective solutions to the problem. Our analysis of the EBFs and the incentives for their existence suggests that greater involvement of the public in the budget process and pressures for greater transparency and comprehensiveness of the budget are important factors that can bring about change toward increased efficiency in the budget and the economy.

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Table 1. Estimates of Extra Budgetary Resources Allocated Through Credit Mechanisms

Year	Change in Government Debt (% of GDP)*	Official Budget Deficit (% of GDP)*	Extra-Budgetary Debt Accumulation (% of GDP)*	Interest Subsidy (% of Directed Credit)	Total Interest Subsidy (% of GDP)*
1963	0.23	2.27	0.00	2.66	0.68
1964	-1.85	3.34	0.00	4.94	1.42
1965	2.81	1.88	0.93	2.10	0.61
1966	0.42	-0.23	0.66	2.52	0.79
1967	2.17	2.79	0.00	2.62	0.90
1968	2.47	4.29	0.00	3.02	1.14
1969	2.13	5.57	0.00	4.42	1.86
1970	3.44	4.99	0.00	2.97	1.26
1971	-1.36	5.85	0.00	5.65	2.11
1972	1.02	9.26	0.00	6.18	2.41
1973	-0.09	3.80	0.00	9.45	3.27
1974	-0.87	3.84	0.00	12.32	3.48
1975	1.36	5.74	0.00	8.60	3.28
1976	0.29	3.74	0.00	13.04	5.25
1977	4.06	6.81	0.00	18.71	8.38
1978	6.00	9.65	0.00	8.08	4.73
1979	5.41	4.37	1.04	10.20	6.39
1980	21.64	13.62	8.03	17.69	14.99
1981	8.48	11.06	0.00	17.23	13.98
1982	7.63	6.16	1.46	14.82	10.70
1983	6.13	6.56	0.00	11.89	8.23
1984	5.66	4.24	1.43	8.97	6.27
1985	4.36	3.94	0.42	6.64	4.88
1986	10.48	8.47	2.01	17.80	15.09
1987	6.47	7.17	0.00	20.39	16.32
1988	9.22	9.47	0.00	21.36	18.24
1989	4.51	4.09	0.42	13.59	11.02
1990	1.96	1.13	0.84	7.95	5.83
1991	1.94	2.17	0.00	15.80	10.42
1992	2.60	1.29	1.31	18.24	10.98
1993	11.16	0.56	10.59	17.23	10.67
1994	5.48	0.21	5.27	25.46	14.45
1995	6.26	0.06	6.20	34.92	17.78
1996	3.44	0.23	3.21	17.47	8.68
1997	4.69	0.13	4.56	13.53	7.01

* Official GDP figures used for scaling purposes.

Source: Plan and Budget Organization (1997) and its updates.

Table 2. Interest Rate Ceilings, the Bazaar Rate, and Inflation (Percentages)

Year	Type of Loan:							Inflation Based on Non-Oil GDP Deflator
	Manufacturing and Mining	Construction and Housing	Agriculture	Trade and Services	Export	One-Year Time Deposits	Free Market Rate (Tehran Bazaar)	
1974	11.0	11.0	6.0-8.0	13.0	13.0	7.0	15.0	18.7
1975	11.0	11.0	6.0-8.0	13.0	13.0	7.0	17.0	8.3
1976	11.0	11.0	7.0-9.0	13.0	13.0	7.0	21.0	17.8
1977	12.0	12.0	7.0-9.0	13.0	13.0	8.0	25.0	22.7
1992	13.0	12.0-16.0	9.0	18.0&over	18.0&over	10.0	N.A.	22.7
1993	16.0-18.0	16.0	16.0	18.0-24.0	18.0	11.5	N.A.	25.0
1994	16.0-18.0	15.0	16.0	18.0-24.0	18.0	11.5	N.A.	31.8
1995	17.0-19.0	15.0-16.0	13.0-16.0	22.0-25.0	18.0	14.0	N.A.	44.5
1996	17.0-19.0	15.0-16.0	13.0-16.0	22.0-25.0	18.0	14.0	N.A.	23.6
1997	17.0-19.0	15.0-16.0	13.0-16.0	22.0-25.0	18.0	14.0	N.A.	19.8

Source: Central Bank of Iran, *Annual Report*, various years.

Table 3. Foreign Exchange Rates and Subsidies

(Equilibrium Exchange Rate = Average of Official and Free Market Rates)

Year	Average Official Exchange Rate Sold by the Central Bank*	Average Free Market Exchange Rate**	Average Foreign Exchange Subsidy Rate (%)	Total Foreign Exchange Subsidy (% of GDP)***
1963	75.75	97.58	12.60	2.57
1964	75.75	87.29	7.08	1.50
1965	75.75	87.34	7.11	1.60
1966	75.75	84.45	5.43	1.26
1967	75.65	82.48	4.32	1.12
1968	75.11	83.07	5.03	1.41
1969	75.36	85.11	6.08	1.83
1970	76.38	85.90	5.87	1.82
1971	76.38	85.35	5.54	1.80
1972	76.38	82.92	4.10	1.29
1973	69.07	75.84	4.68	1.06
1974	67.63	73.65	4.27	1.09
1975	67.64	74.45	4.80	1.83
1976	70.22	79.58	6.24	2.08
1977	70.62	79.99	6.22	2.16
1978	70.48	91.10	12.76	4.15
1979	70.48	159.50	38.71	10.25
1980	70.62	234.25	53.67	19.57
1981	87.56	395.00	63.71	32.41
1982	108.58	475.00	62.79	27.04
1983	134.64	403.58	49.97	22.24
1984	166.95	610.67	57.06	23.79
1985	207.30	639.64	51.05	20.48
1986	217.50	815.17	57.88	22.13
1987	221.50	1134.60	67.33	30.40
1988	237.10	954.17	60.19	19.30
1989	299.10	1431.30	65.43	31.63
1990	394.30	1525.80	58.93	32.51
1991	511.70	1535.20	50.00	28.94
1992	686.20	1624.50	40.61	18.51
1993	1222.50	1968.80	23.39	8.48
1994	1750.00	2602.20	19.58	3.79
1995	2200.00	4049.30	29.59	6.35
1996	2200.00	4360.60	32.93	7.28
1997	2200.00	5626.70	43.78	9.34

* Weighted average, with the share of each transaction in total sales of foreign exchange by the Central Bank as the weight for the rate used in that transaction.

** Simple average of monthly closing rates.

*** Official GDP figures used for scaling purposes.

Source: Computed based on data from the Central Bank of Iran, *Economic Report and Balance Sheet*, various years. Free market rates are obtained from the PDS databank compiled based on the Central Bank data by the Institute for Research in Planning and Development, Tehran, Iran.

Table 4. Oil Prices and Subsidies

(Equilibrium Exchange Rate = Average of Official and Free Market Rates)

Year	Export Price of Iranian Crude Oil (\$/Barrel)	Wholesale Fuel Price Index in Iran	Fuel Processing Cost Index	Price Index of Domestic Crude Oil Sales	US\$ Price of Domestic Crude Sales	Domestic Oil Subsidy Rate (%)	Total Dom. Oil Subsidy (% of GDP)*
1963	\$2.31	26.5	4.13	22.37	\$1.71	26.12	1.87
1964	\$2.09	30.0	4.19	25.81	\$2.09	0.00	0.00
1965	\$1.90	30.7	4.11	26.59	\$2.16	-13.54	0.00
1966	\$1.95	30.1	4.09	26.01	\$2.15	-10.19	0.00
1967	\$1.86	30.1	3.92	26.18	\$2.19	-17.67	0.00
1968	\$1.81	30.1	4.04	26.06	\$2.18	-20.37	0.00
1969	\$1.76	30.1	3.99	26.11	\$2.15	-22.56	0.00
1970	\$1.74	30.0	3.96	26.04	\$2.12	-21.57	0.00
1971	\$2.46	30.0	4.30	25.70	\$2.10	14.52	0.58
1972	\$2.41	30.1	4.59	25.51	\$2.12	12.16	0.37
1973	\$4.29	30.4	5.94	24.46	\$2.23	47.97	1.82
1974	\$10.83	30.9	9.35	21.55	\$2.02	81.39	4.80
1975	\$12.08	31.1	9.90	21.20	\$1.97	83.67	5.34
1976	\$12.55	31.2	11.40	19.80	\$1.75	86.08	4.61
1977	\$13.29	33.8	13.59	20.21	\$1.77	86.65	4.63
1978	\$12.42	36.6	15.02	21.58	\$1.77	85.78	4.38
1979	\$25.27	38.3	19.08	19.22	\$1.10	95.63	13.34
1980	\$41.25	49.2	23.55	25.65	\$1.11	97.30	24.14
1981	\$31.25	63.7	29.32	34.38	\$0.94	96.99	17.49
1982	\$28.31	65.7	33.59	32.11	\$0.73	97.43	15.36
1983	\$27.05	66.0	37.71	28.29	\$0.69	97.43	12.12
1984	\$27.34	66.0	41.52	24.48	\$0.42	98.48	17.72
1985	\$21.94	66.1	43.48	22.62	\$0.35	98.39	15.18
1986	\$11.21	73.0	49.20	23.80	\$0.30	97.28	8.00
1987	\$19.06	98.0	60.46	37.54	\$0.37	98.08	21.20
1988	\$16.09	98.4	70.73	27.67	\$0.31	98.09	14.00
1989	\$17.59	98.9	84.35	14.55	\$0.11	99.37	21.29
1990	\$21.58	100.0	100.00	0.00	\$0.00	100.00	19.55
1991	\$17.14	142.9	123.59	19.31	\$0.12	99.27	10.24
1992	\$18.54	181.8	154.51	27.29	\$0.16	99.16	13.96
1993	\$17.01	242.5	213.13	29.37	\$0.12	99.28	13.67
1994	\$16.87	358.2	289.75	68.45	\$0.21	98.77	15.41
1995	\$17.65	479.9	404.02	75.88	\$0.16	99.09	17.60
1996	\$20.78	643.9	489.03	154.87	\$0.31	98.50	14.29
1997	\$18.09	775.2	566.88	208.32	\$0.35	98.06	13.58

Source: Computed based on Plan and Budget Organization (1997) and its updates.

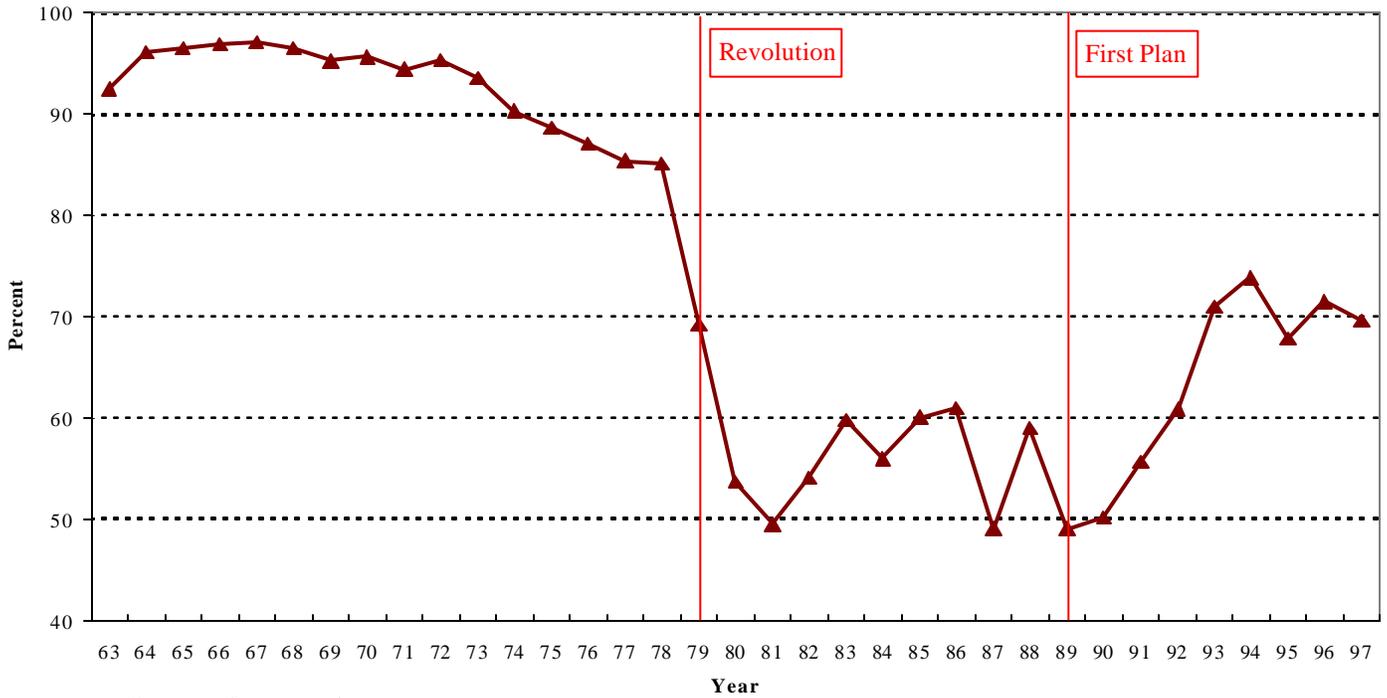
Appendix

Table A1. Foreign Exchange and Oil Subsidies: Equilibrium Exchange Rate = Free Market Rate

Year	Ave. Foreign Exch. Subsidy Rate (%)	Total Foreign Exch. Subsidy (% of GDP)*	Implicit US\$ Price Index of Domestic Crude Oil Sales	Domestic Oil Subsidy Rate (%)	Total Dom. Oil Subsidy (% of GDP)*
1963	22.37	5.14	77.5	29.74	2.40
1964	13.22	2.99	100.0	0.00	0.00
1965	13.27	3.20	102.9	-13.51	0.00
1966	10.30	2.52	104.2	-11.91	0.00
1967	8.29	2.24	107.3	-20.78	0.00
1968	9.58	2.83	106.1	-22.72	0.00
1969	11.46	3.65	103.7	-23.71	0.00
1970	11.08	3.63	102.5	-22.96	0.00
1971	10.51	3.60	101.8	13.27	0.56
1972	7.88	2.57	104.0	9.65	0.31
1973	8.94	2.11	109.0	46.78	1.86
1974	8.19	2.17	98.9	80.89	4.98
1975	9.15	3.66	96.3	83.32	5.57
1976	11.75	4.16	84.1	85.97	4.89
1977	11.72	4.33	85.4	86.54	4.91
1978	22.64	8.30	80.1	86.50	4.98
1979	55.81	20.51	40.7	96.62	18.70
1980	69.85	39.14	37.0	98.12	37.41
1981	77.83	64.82	29.4	98.03	28.93
1982	77.14	54.08	22.9	98.31	25.24
1983	66.64	44.49	23.7	98.17	18.32
1984	72.66	47.57	13.6	98.96	27.96
1985	67.59	40.97	12.0	98.86	23.03
1986	73.32	44.26	9.9	98.16	12.75
1987	80.48	60.79	11.2	98.77	35.72
1988	75.15	38.61	9.8	98.72	22.57
1989	79.10	63.26	3.4	99.59	35.30
1990	74.16	65.02	0.0	100.00	31.06
1991	66.67	57.89	4.3	99.48	15.39
1992	57.76	37.03	5.7	99.36	19.67
1993	37.91	16.97	5.0	99.38	16.89
1994	32.75	7.58	8.9	98.90	18.45
1995	45.67	12.70	6.3	99.25	22.84
1996	49.55	14.56	12.0	98.79	19.06
1997	60.90	18.69	12.5	98.55	19.63

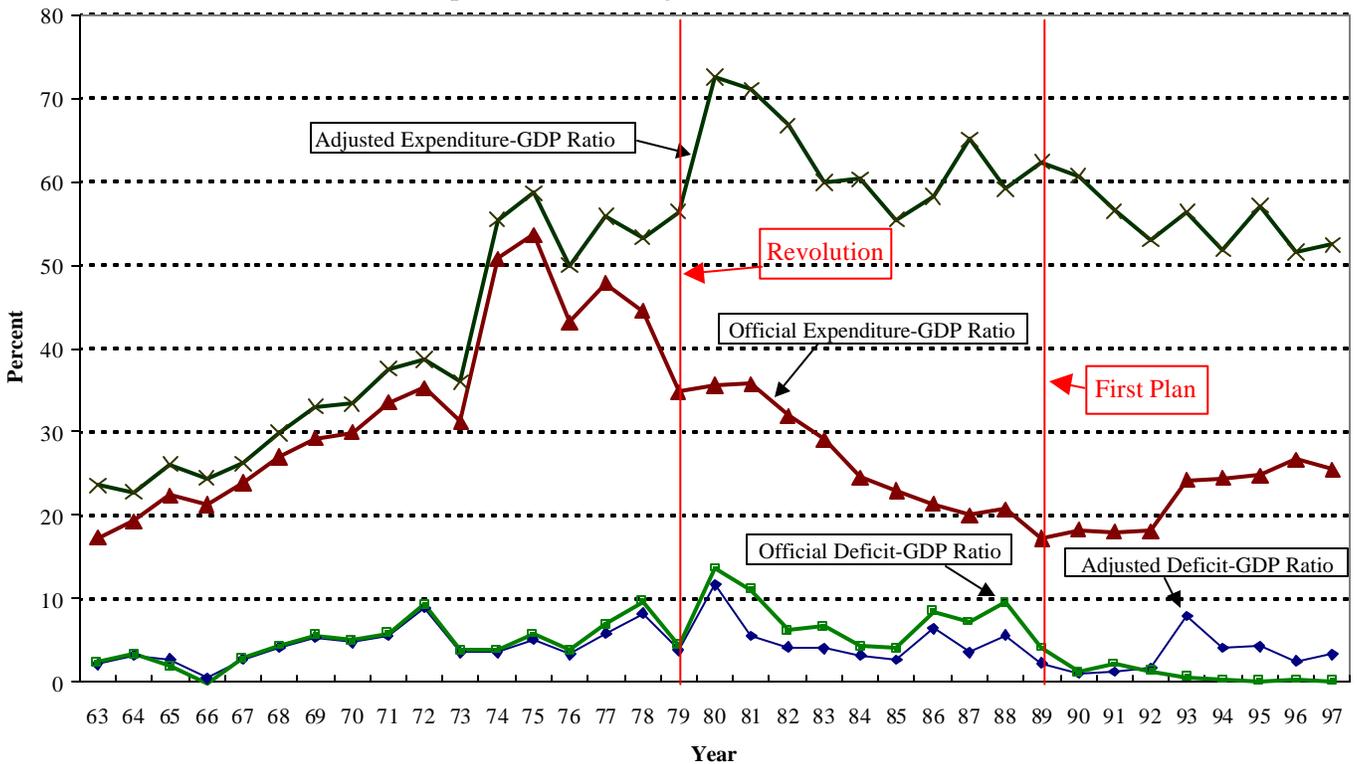
Source: Computed based on Plan and Budget Organization (1997) and its updates.

Figure A1. The Ratio of Official to Adjusted GDP
(Equilibrium Exchange Rate = Free Market Rate)



Source: Computed.

Figure A2. Government Expenditure and Deficit
Official and Adjusted Values
(Equilibrium Exchange Rate = Free Market Rate)



Source: Computed.