IMF Working Paper

WP/97/101

INTERNATIONAL MONETARY FUND

Middle Eastern Department

Fiscal Policy and Growth in the Middle East and North Africa Region

Prepared by Sena Eken, Thomas Helbling, and Adnan Mazarei[1]

August 1997

Abstract

Establishing a policy framework to sustain high rates of growth is a major challenge facing the economies of the Middle East and North Africa. Given the strikingly dominant role of governments in these economies, this paper focuses on the contribution of fiscal consolidation and reform toward addressing this challenge. On the basis of an examination of fiscal structures, reform and adjustment efforts, and their growth implications during 1980-95, it concludes that the ongoing process of fiscal reform—aimed at reducing budget deficits, improving the budgetary structure, and enhancing the effectiveness of government interventions—is key to ensuring macroeconomic stability and fostering growth.

JEL Classification Numbers: E62, H2, H50, H60, H62, N15.

Keywords: Fiscal Policy; Growth; Middle East and North Africa.

Authors' E-Mail Address: seken@imf.org, thelbling@imf.org, and amazarei@imf.org.

---

[1]We are grateful to George Abed, Etienne de Callatay, Mohamed El-Erian, and colleagues in the Middle Eastern Department for helpful comments on earlier drafts of this paper, and to Peter Kunzel, Margaret Boesch, and Massa Lansanah-Richardson for assistance. A summary version of this paper was prepared for the 1996 MENA Conference in Cairo and was published in IMF (1996).

TABLE OF CONTENTS

Charts

SUMMARY

Governments in the Middle East and North Africa (MENA) region have traditionally played a dominant role in their economies, especially in terms of the resources they command, their contribution to output, and their impact on economic incentives. Government expenditures in the region have been relatively high by international standards, as have revenues. Until recently, the MENA region has been characterized by large fiscal imbalances, which have been an important element underlying the low savings rate and macroeconomic instability in these countries.

The empirical evidence on the growth effects of the level and composition of government expenditure and revenue, and of the budget deficits in MENA countries, is mixed. In non-oil-exporting countries the study found, some evidence of the negative impact of overall expenditure and revenue as well as budget deficits on growth. In oil-exporting countries, however, some evidence of the positive impact of both overall expenditure and revenue on non-oil growth emerged. In both groups of countries, government investment did not appear to have provided the impetus to growth implied by many theoretical models, supporting earlier findings about the productivity of public investment.

Policy makers in the MENA region have set the achievement of high sustainable rates of growth as their principal objective. This requires improvements in the savings performance and in the environment conducive to domestic and foreign investment, as well as a lowering of the vulnerability of these economies and their finances to exogenous shocks. To these ends, fiscal policy reforms aimed at reducing fiscal deficits, improving the structure of expenditures and revenues, and enhancing the effectiveness of government interventions could play an important role.

I. INTRODUCTION

During the 1970s and early 1980s, the countries of the Middle East and North Africa (MENA) region achieved high rates of economic growth, with a favorable external environment, in particular sharp increases in oil prices, providing a substantial growth impetus.[1] The oil-exporting countries were not the only beneficiaries of the oil boom. Most non-oil-exporting countries in the region benefited from it indirectly, including through official (grants) and private (remittances) transfers. During this period, the MENA governments, through their expenditure and public enterprises, played a dominant role in their economies.

Starting in the early 1980s, the availability of financing decreased rapidly following the decline in oil prices, with corresponding effects on government finances and activities, as well as on external balances. Meanwhile, the domestic private sector was not able to offset the negative effects of these developments on growth. Although many countries made progress starting in the mid-1980s in addressing their imbalances and embarked on structural reform programs, during 1980-95 the region's per capita income stagnated and fell short of that achieved by developing countries as a whole, and unemployment rates remained high.

Looking forward, policy makers in the region have identified growth as the economic policy priority so as to generate jobs for the increasing number of entrants into the labor force, reduce unemployment in some countries, and, more generally, improve the living standards in their countries. There is, thus, an increasing awareness of the need to promote a macroeconomic environment conducive to private investment and to address the vulnerable nature of MENA economies to exogenous shocks. Given the dominant role of the public sectors in the countries of the MENA region, especially in terms of the resources that they command, their contribution to output, and their impact on economic incentives, reforming public finances is an important component in addressing these challenges. To this end, this paper studies the nexus between growth and fiscal policy in the MENA countries, and examines the scope for enhancing growth and employment through fiscal reform.

It should be noted at the outset that a study with a regional perspective does not address the differences among countries in terms of economic attributes and performance, and faces the drawbacks induced by the generalizations needed to establish the predominant common characteristics and trends in a vast geographical area with many similarities, but also many disparities. The study covers the period 1980-95 primarily to gain a common denominator in the database for the empirical analysis. Data limitations prevent starting the analysis in the early 1970s—a period when oil export earnings rose sharply and the MENA

---

[1]The MENA region is defined here as Algeria, Bahrain, Iran, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (U.A.E.)—the oil exporting countries—and Djibouti, Egypt, Israel, Jordan, Lebanon, Mauritania, Morocco, Somalia, Sudan, Syria, Tunisia, and Yemen—the non-oil exporters. Iraq and Somalia are not included in the analysis given the lack of recent economic data.

countries experienced a period of rapid economic growth. It should be noted that in the period covered, armed conflicts and civil strife in a number of countries complicate economic analysis.

The remainder of the paper is organized as follows. Section II provides a broad overview of the macroeconomic developments in the MENA region during 1980-95. Section III summarizes the theoretical and empirical findings in the recent literature on the relationship between fiscal policy and growth. Section IV examines the fiscal structure of the countries and evaluates its potential implications for economic growth. Section V discusses the extent of fiscal imbalances in the MENA region and examines their links with macroeconomic instability. Section VI reviews the extent and pattern of fiscal adjustment in the MENA region since the mid-1980s. Section VII attempts to assess empirically the links between fiscal policy and economic growth in this region. Conclusions and the policy implications of the above discussions are provided in Section VIII.

II. AN OVERVIEW OF MACROECONOMIC DEVELOPMENTS, 1980-95

During 1980-95, macroeconomic performance in the MENA region was adversely affected by weak economic activity in the industrial countries in the early part of the 1980s and 1990s, the sharp decline in oil prices in the mid-1980s and the subsequent weak oil market conditions which contributed to wide fluctuations in its terms of trade, and armed conflict and civil strife in a number of countries.[2] The domestic policy response during this period varied among the countries in the region. In recent years, adjustment and reform efforts have been stepped up in many of the MENA countries.

With continuous positive rates of real economic growth in the 1990s, the region achieved an average annual GDP expansion of 2.8 percent during 1980-95.[3] With such a growth performance and rapid population expansion, average per capita real GDP declined by 0.5 percent a year (Chart 1). In contrast, developing countries as a whole were able to increase real per capita income by 2.8 percent during the same period. Within the region, the per capita income of the oil-exporting countries declined on average by about 1.8 percent per annum, due largely to a sharp drop in oil prices from their peak in the early 1980s. The per capita income of non-oil exporters rose by 1.4 percent. Meanwhile, with the rapid labor force growth unemployment remained high; both unemployment and labor growth rates in non-oil-exporting MENA countries have exceeded those in the rest of the world.[4]

---

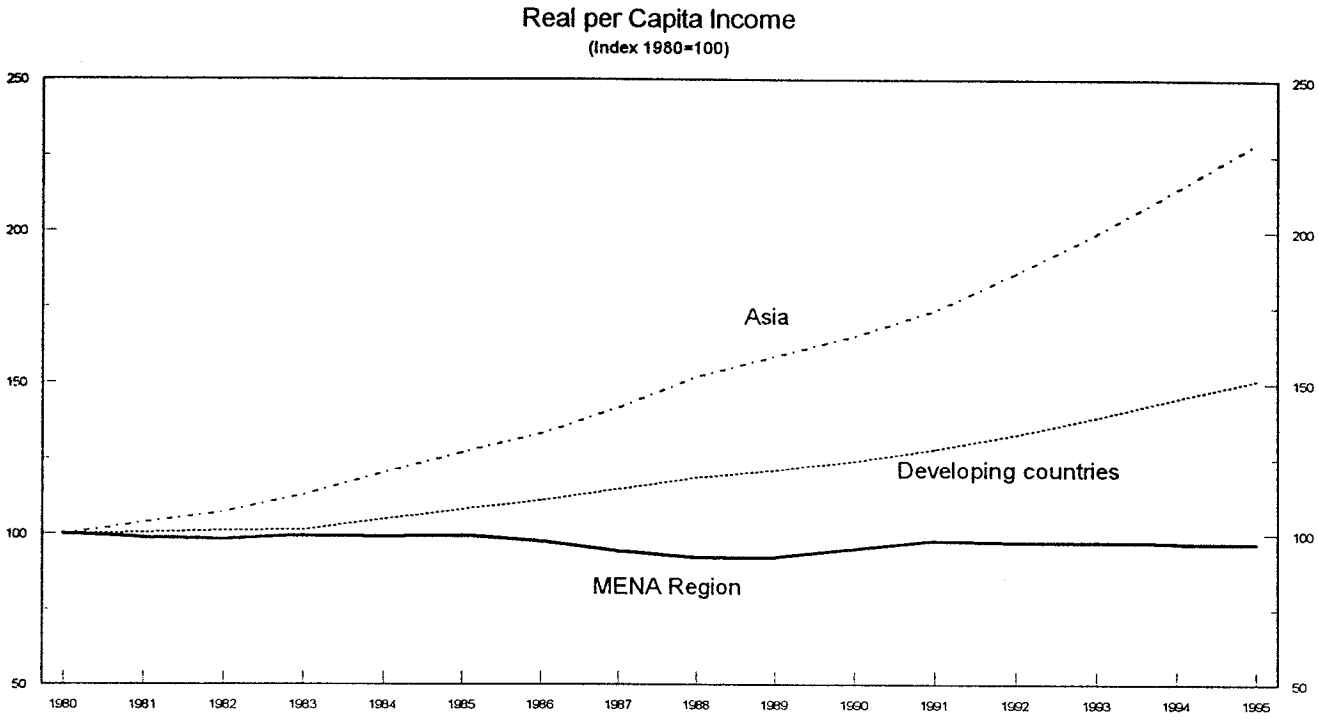
[2]For an overview of the economic performance in the MENA region during this period, see El-Erian et al (1996).

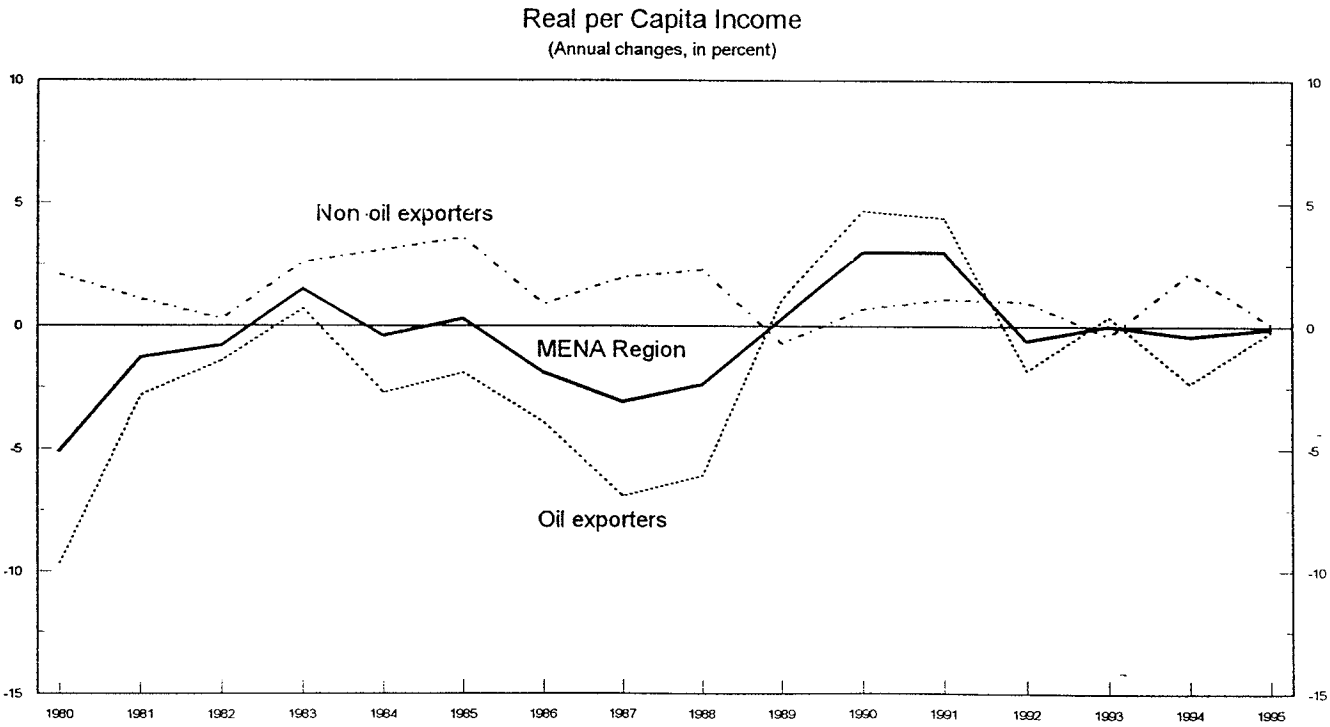
[3]All country variables were aggregated to regional variables on the basis of GDP weights.

[4]See World Bank (1995).

Chart 1

MENA Region: Growth Indicators, 1980-95





Source: World Economic Outlook.

Domestic savings of the MENA region were very high at the beginning of the 1980s (Chart 2). However, savings fell sharply during the 1980s and remained low thereafter.[5] Constrained by the deterioration in the savings performance, capital formation slowed down during this period, with fluctuations in investment levels closely following developments in oil prices on world markets. Gross fixed capital formation in the region during 1980-95 was on average lower than in developing countries and well below the average for Asian countries (Chart 3). Reflecting the role of the government, the share of public sector investment in total investment was higher in the MENA region than in other developing country groups.

The inflation performance of the MENA region has been fairly good in terms of both level and variability. In 1980-95, inflation amounted, on average, to about 16 percent, while it averaged about 37 percent in the developing countries (Chart 4). Within the region, the inflation rates of the oil exporters were lower than those of the non-oil exporters, reflecting in large part the greater spillover effects to the balance of payments of excess demand pressures. During the 1990s, the inflation performance of non-oil exporters improved because of strengthened monetary and fiscal policies in a number of countries.

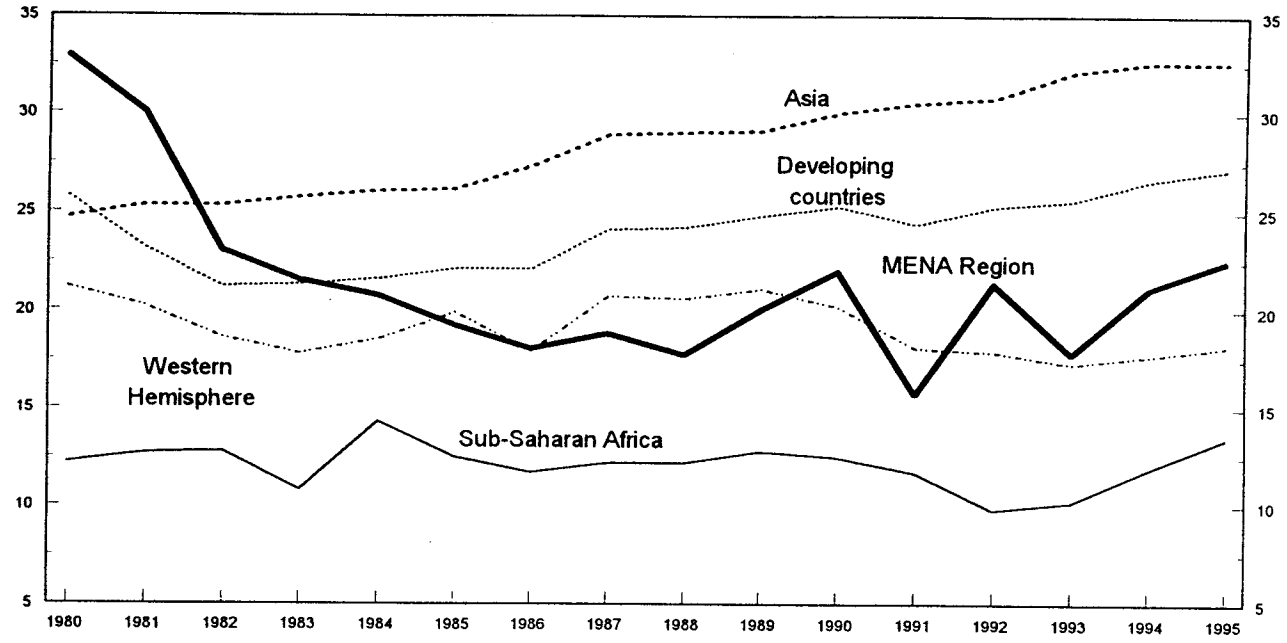
The external current account position of the MENA countries was on average slightly worse compared with that of developing countries as a whole (Chart 5). However, as the MENA region's external terms of trade were very much influenced by developments in the oil markets, the external current account position showed an overall marked deterioration during this period and registered sharp fluctuations as compared with that in any other country groupings. Within the region, the deterioration and fluctuations in the external current account position were more significant in oil exporters than in other countries. Since 1991, however, there has been a steady improvement in the region's current account position, mainly reflecting adjustment in oil exporters. In financing external current account deficits, oil-exporting countries, in particular the Gulf countries, relied heavily on their large accumulated foreign assets, while others resorted mainly to medium- and long-term borrowing from official sources. Private portfolio capital and direct investment inflows to the region remained low.

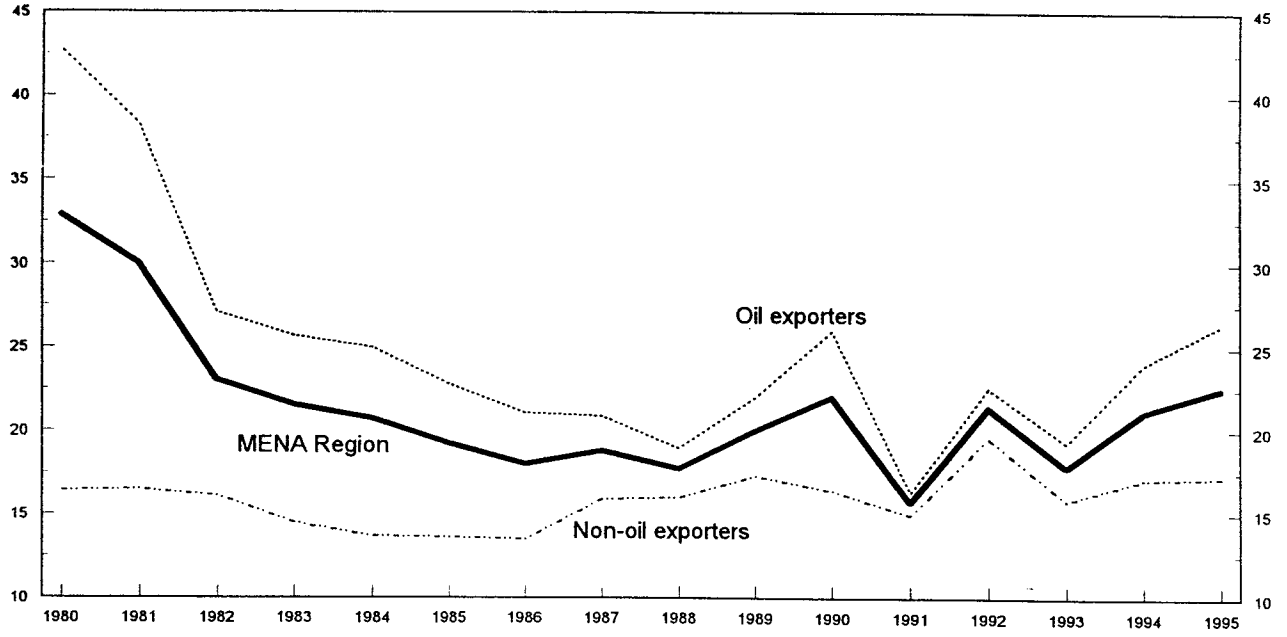
The above summary of macroeconomic developments underscores the need for achieving high sustainable rates of growth, and reducing the vulnerability of the economies to exogenous shocks. As widely recognized by policy makers in the MENA countries, these objectives call for improvements in the savings performance and in the environment conducive to private investment, as well as reductions in the dependency of the region's economy and its finances on oil receipts. To these ends, fiscal policy could potentially play an important role.

---

[5]See Bisat, El-Erian, and Helbling (1997).

Chart 2
Developing Countries and the MENA Region
Domestic Savings, 1980-95
(in percent of GDP)

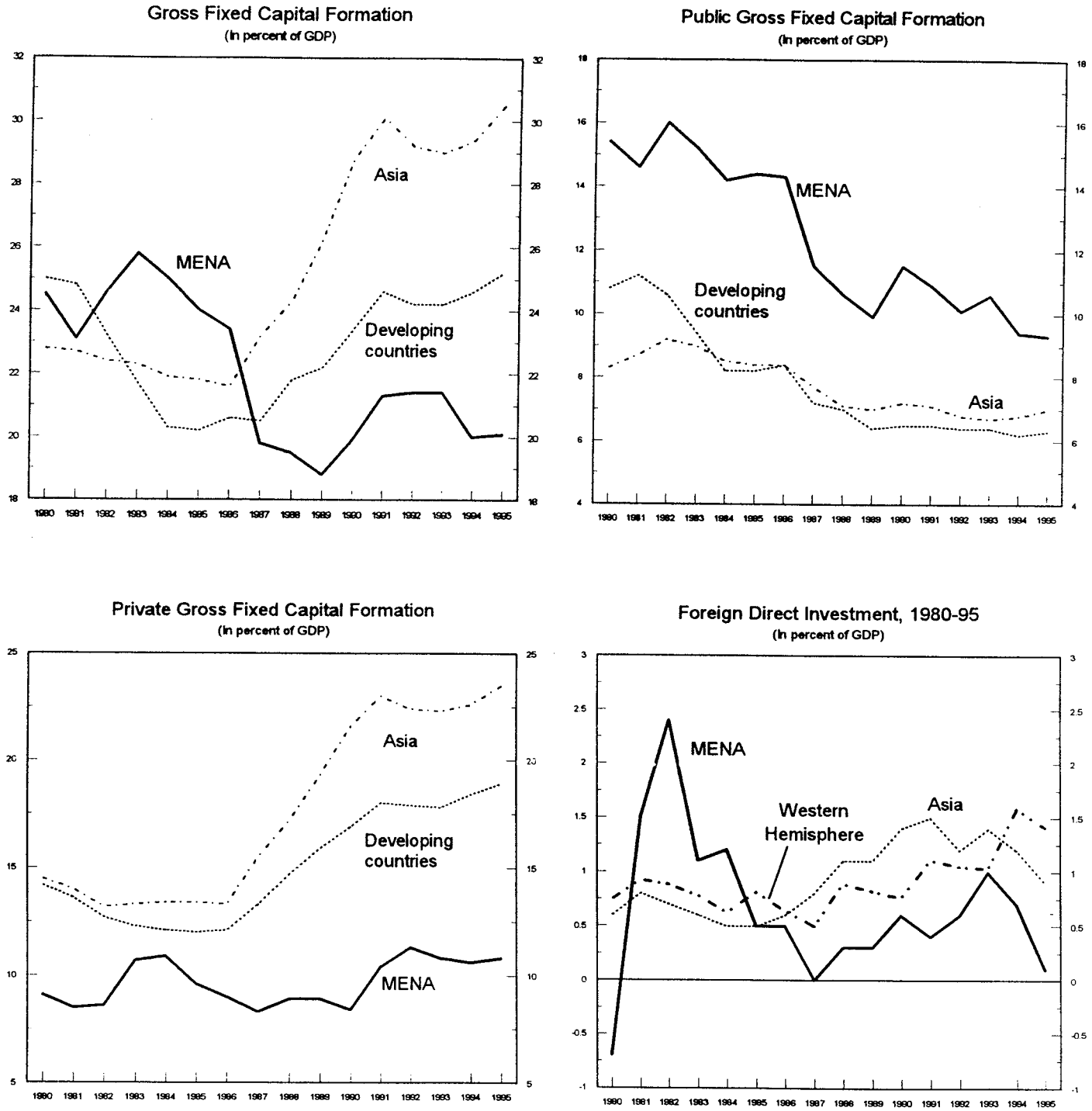




Source: World Economic Outlook.

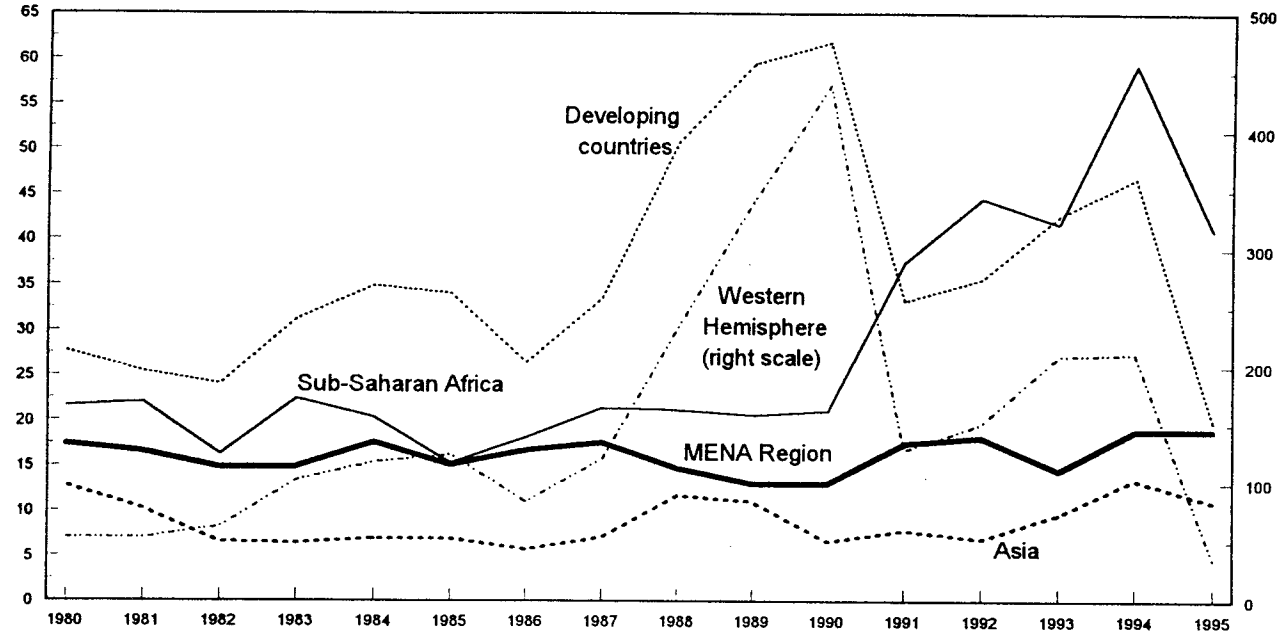
Chart 3

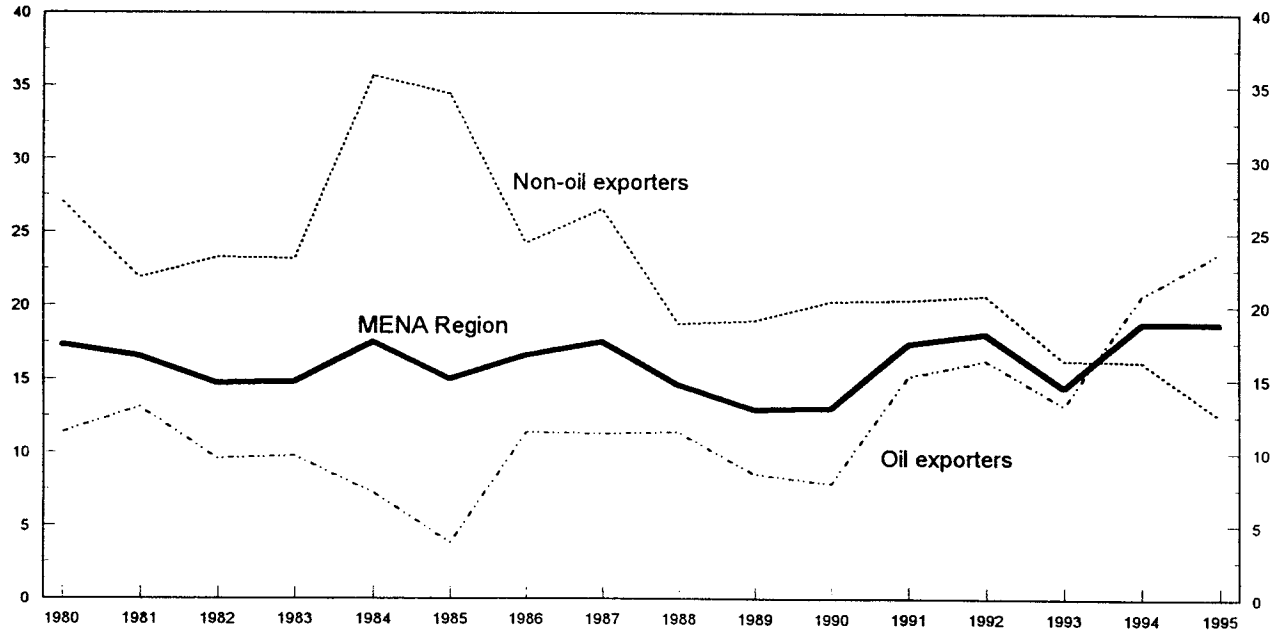
MENA. Investment Indicators, 1980-95



Source: World Economic Outlook, and Balance of Payments Statistics.

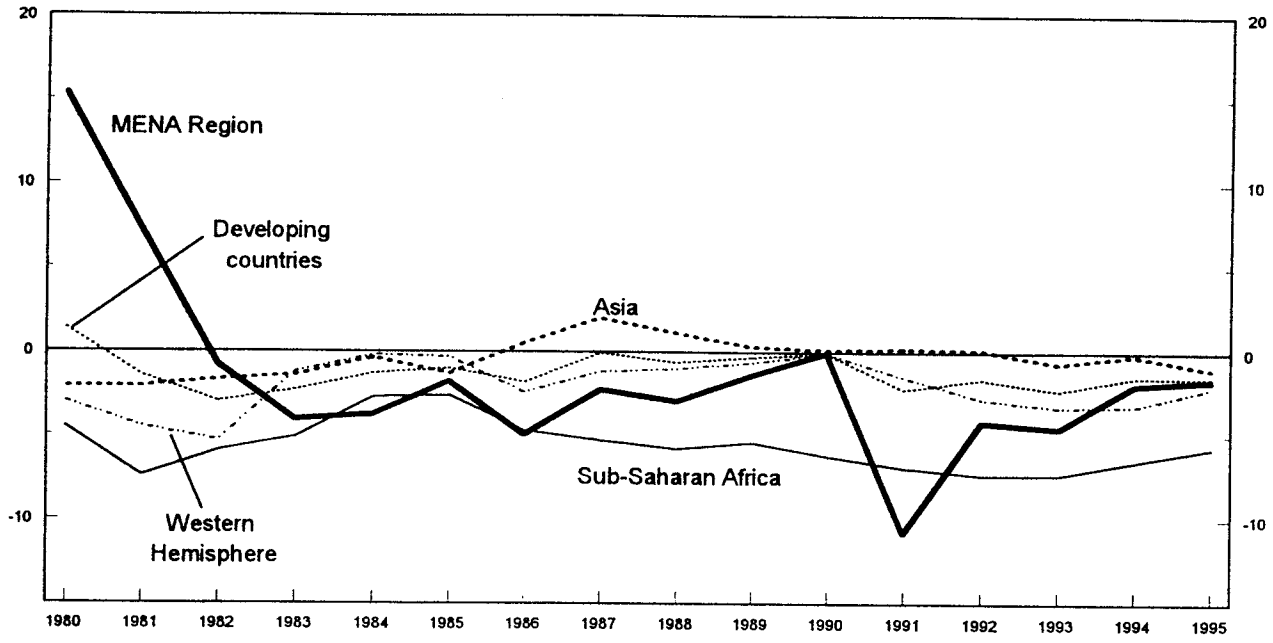
Chart 4
Developing Countries and the MENA Region
Inflation, 1980-95
(Annual changes , in percent)

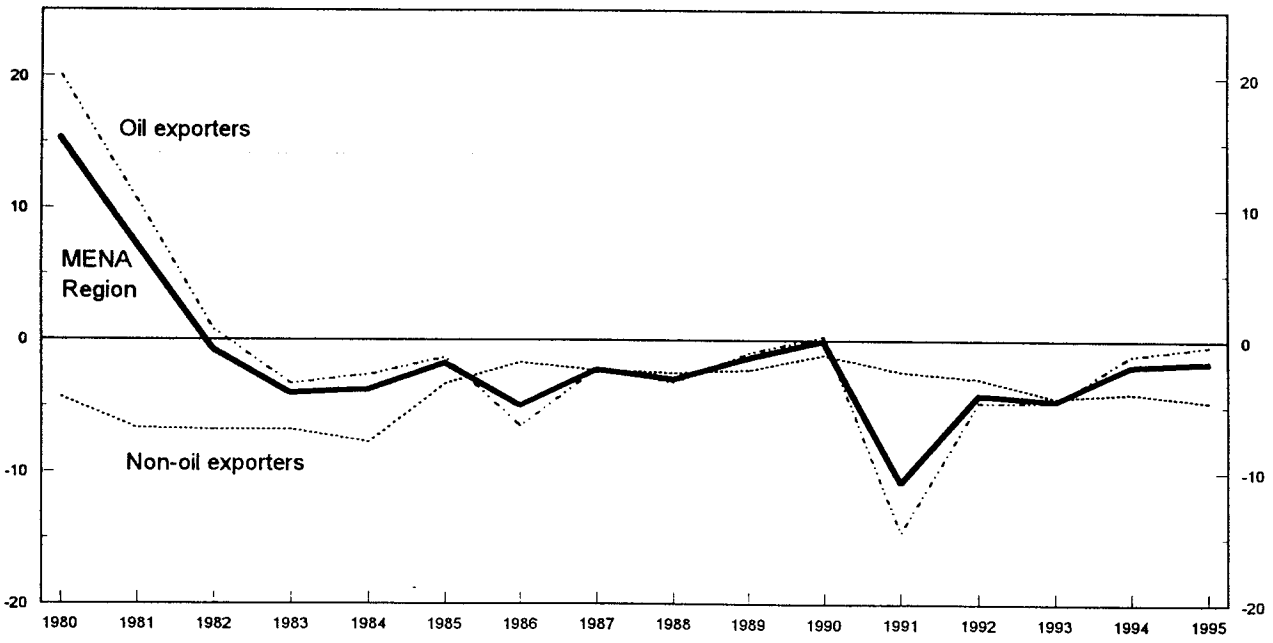




Source: World Economic Outlook.

Chart 5
Developing Countries and the MENA Region
External Current Account, 1980-95
(In percent of GDP)





Source: World Economic Outlook.

III. FISCAL POLICY AND GROWTH: A SELECTIVE REVIEW OF THE LITERATURE

There is now a burgeoning literature that points to a number of important links between fiscal policy and economic growth.[6] These links include direct effects through expenditures and revenues, and an indirect impact through macroeconomic instability.

A. Expenditures

Government expenditures affect growth primarily through two channels. First, they can increase the quantity of factors of production and thereby raise growth. Public investment that augments the stock of infrastructure capital or the stock of capital at public enterprises are examples of such expenditures. Second, government expenditures could raise growth indirectly by raising the marginal productivity of privately supplied factors of production. Public spending on education, health, and other services that contribute to the accumulation of human capital are examples of such expenditures.[7] Two qualifications need to be added to the above propositions, however. First, government expenditures on factors such as infrastructures have diminishing marginal returns, and there is an optimal share of government spending relative to private sector spending beyond which government spending becomes inefficient. Second, for government expenditures to be justified on efficiency grounds, they must either have a public good character or address some other market imperfection, such as indivisibilities or finance constraints. These qualifications suggest that government expenditures should be assessed both in terms of their level and their composition.

A large part of the recent empirical growth literature has examined the contributions of government expenditure and its composition to growth.[8] Overall, the evidence on the nature of the relationships is mixed.[9] Several studies show that while the level of government expenditures is inversely related to growth, the rate of increase in expenditures does affect growth in a positive way. More recent results by Devarajan et al (1996), however, indicate that there is no significant relationship between growth and the level of expenditures (as

---

[6]See, for example, Barro (1990), Barro and Sala-i-Martin (1992), Cashin (1995), Easterly and Rebelo (1993), Engen and Skinner (1992), and Tanzi and Zee (1996).

[7]See Barro and Sala-i-Martin (1992).

[8]These cross-sectional regressions also explain growth by a number of nonfiscal variables such as initial GDP, the investment to GDP ratio, and labor force growth.

[9]Recent empirical results along the lines of Barro (1991) should, indeed, be interpreted with some caution since they are based on reduced form regressions that could suffer from problems of robustness and reverse causality. Moreover, Levine and Renelt (1992) provided overwhelming evidence that many partial correlations are not robust in the sense that coefficients become insignificant once other explanatory variables are included.

measured by their share in GDP). The empirical literature on the effects of the composition of expenditures has also produced mixed results. Several studies, including Landau (1983), have obtained a negative partial correlation between real GDP growth and government consumption expenditure (as measured by the ratio of government expenditures to GDP). Barro (1991) has provided more refined tests of the impact of government consumption expenditure on growth. He deducted defense and education expenditures from general government consumption expenditures in order to obtain a more accurate measure of government consumption. This revised measure of government consumption (as a share of GDP) was also found to be negatively correlated with economic growth. More recently, however, Devarajan et al have found a positive relationship between public consumption expenditures (as measured by current outlays as share of total expenditures) and growth. The evidence on the relationship between public investment and growth is also ambiguous. Easterly and Rebelo (1993) found that, in general, government investment is positively correlated with growth. Public investment in transportation and communication turned out to be consistently positively correlated with growth in empirical studies. Devarajan et al, however, have obtained evidence of an inverse relationship between public investment and growth, suggesting that governments have been misallocating expenditures in favor of capital expenditures at the expense of current outlays. Despite the inconclusive nature of the empirical literature, current thinking seems to lean toward the view that a realignment of government spending in the direction of health, education, and basic infrastructure tends to have a positive impact on growth.

B. Revenues

The level and nature of government revenues affect economic growth through their impact on the supply and demand for capital and labor (Milesi-Ferreti and Roubini (1994) and Xu (1994)). In general, most taxes other than lump-sum taxes have a detrimental effect on growth as they distort the allocation of resources.[10] Taxes levied on reproducible factors, such as physical or human capital, are the most prominent examples of taxes that reduce the rate of output growth. In models with endogenous growth, such taxes reduce the constant steady state rate of return of privately supplied, reproducible factor of production, and thus the steady state growth rate. Trade taxes also have the potential to hinder growth. Tariffs, for example, could raise the relative price of capital or intermediate goods, and thus reduce the steady state marginal rate of return of both these inputs. These theoretical considerations imply that, as with expenditure, the level of taxes relative to the size of the economy as well as their structure matter for growth. Furthermore, they also suggest that distortions from taxes should be kept to a minimum in fiscal adjustment strategies through shifting the burden of taxation from investment and/or international trade to domestic consumption.

---

[10]Indeed, the costs of taxation have to be assessed vis-à-vis the growth benefits of expenditures that they help finance. Also, not all taxes have adverse effects on long-run economic growth; the effects depend on whether the tax in question is being used as a vehicle to correct for externalities or other related distortions.

In the MENA countries, a large share of the revenues of the governments emanate from nontax sources, such as receipts from petroleum exports. An increase in receipts from exports of primary goods could help raise expenditures and stimulate growth if the higher government revenues are spent efficiently.[11] An increase in revenues from primary export earnings, if accompanied by a reduction in non-distortionary taxes, could have an impact on growth through its impact on the private sector's labor-leisure tradeoff. With higher income, private agents might opt for more leisure, which would lower the steady-state rate of economic growth. A permanent increase in government receipts from primary exports that lead to higher transfers to the private sector are likely to have a similar impact on labor-leisure tradeoffs and, hence, on growth.

Many empirical studies have found evidence of an inverse relationship between taxes and economic growth, but overall the results are not very robust. Engen and Skinner (1992), for example, obtained the result that changes in the average tax rate have a significant negative effect on the average rate of GDP growth in a cross-sectional sample of 107 countries. Similarly, Koester and Kormendi (1989) have found evidence of the negative impact of rising marginal tax rates on output growth. According to Levine and Renelt (1992), while there is some evidence on adverse impact from both the level or the rate of change of taxes on growth, the results are not very robust.

C. Budget Deficits

The overall budgetary position also affects growth, mainly through the impact of its financing. The inflationary financing of large and possibly growing budget deficits distort relative prices, create uncertainties, and often contribute to inefficiencies in the allocation of resources. Non-inflationary financing of large fiscal imbalances leads to a buildup of debt and can crowd out private investment through pressures on interest rates and/or the availability of funds.[12] Furthermore, an environment with large fiscal imbalances, in which the stance of future policies is unclear adversely affect long-term investment decisions, which require a minimum level of forecasting clarity.

---

[11]Note that here only the impact of changes in primary export revenues on steady-state growth are being considered. Non-steady state considerations would indeed be more complicated and maybe more interesting. Such considerations would need to include, for example, the Dutch Disease phenomenon where an increase in revenues from the export of natural resources could lead to an overall contraction in output due to the impact of high export-related inflows on the country's domestic wages and the real effective exchange rate. On Dutch Disease issues and related fiscal problems, see Cuddington (1988), Gelb (1988), and Neary and van Wijnbergen (1985).

[12]The latter possibility is particularly relevant in the case of financial repression, in which the structure and regulation of the financial system are affected by the financing needs of the government.

Fischer (1993) found empirical evidence of the positive link between growth and macroeconomic stability (defined in terms of the inflation rate and its volatility, the black market exchange rate premium, the ratio of budget surplus to GDP, and changes in terms of trade). His cross-sectional and panel data growth regressions broadly confirm expectations. In particular, the negative correlation between the overall budget deficit and growth seems to be a robust empirical result.

IV. FISCAL STRUCTURE OF THE MENA COUNTRIES

The fiscal structure of the MENA countries reflects the important role of the government in these economies and highlights some of the ways in which fiscal policy affects economic incentives and thus growth. On average, the ratio of government expenditure to GDP has been high by international standards, accounted for mainly by current expenditures.[13] This has necessitated the mobilization of revenues that are also large by international standards. In oil exporting countries, governments have relied heavily on receipts of oil revenues, which have been very volatile.[14] In the non-oil countries, revenue mobilization has relied mainly on indirect taxes, in particular import duties, and on nontax revenues.

A. The Expenditure Patterns

Despite different natural resource endowments and socio-political structures, the governments in both the oil and the non-oil-exporting countries of the MENA region have played a dominant role in their economies. Most strikingly, the average share of government expenditure and net lending in GDP during 1980-95 was about 39 percent in the MENA region, larger than in any other country grouping (Chart 6).[15] This ratio was about 22 percent for the developing countries as a group, and about 25 percent for the industrial countries (Table 1). Interestingly, the share of expenditures in GDP was higher in the MENA non-oil-exporting countries than in the oil-exporting ones. Also noteworthy is the fact that, compared with the other regions in the world, government expenditures in the MENA countries displayed a larger fluctuation during this period. While expenditures in both the oil and non-oil economies have been large, it is necessary to underscore some of the structural differences between these two groups.

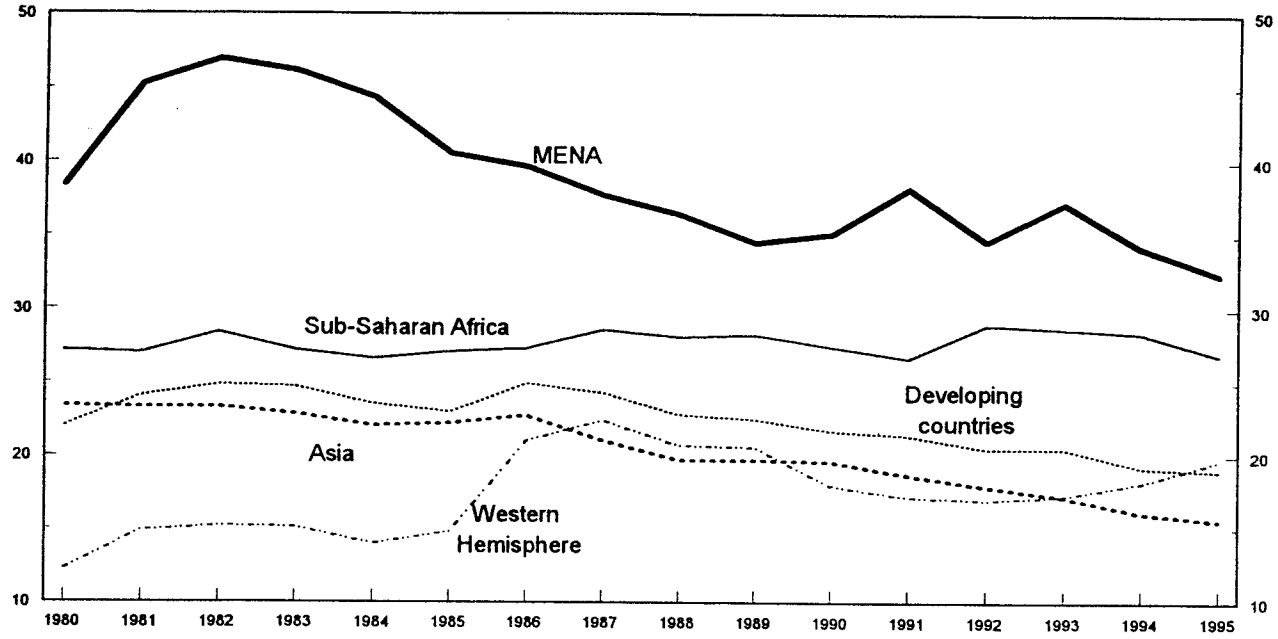
---

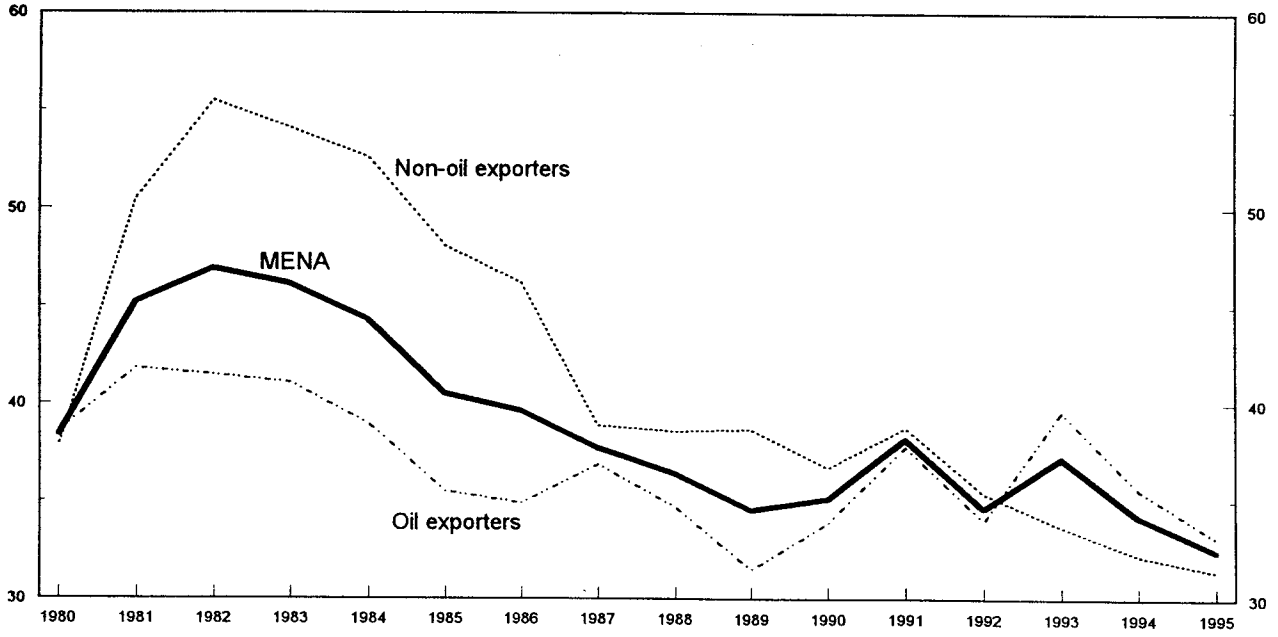
[13]International comparisons should be interpreted with caution given that the coverage of government expenditures is not uniform across countries.

[14]For discussions of fiscal policy in the oil exporting countries, see Chu (1990), Cuddington (1988), El-Kuwaiz (1990), and Morgan (1979).

[15]In many instances, public enterprises are outside the government budget. The dominant role of the government in the MENA economies becomes more pronounced if they are taken into account fully. On the other hand, expenditures by local governments are not generally significant in the MENA countries.

Chart 6
Developing Countries and the MENA Region
Total Expenditures and Net Lending, 1980-95
(In percent of GDP)





Source: World Economic Outlook.

Table 1. MENA and the Rest of the World: Public Finances, 1980-95

(As a percent of GDP)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	Average 1980-95	Average 1991-95
1. Total Expenditure and Net Lending																		
MENA	38.4	45.2	46.9	46.1	44.3	40.5	39.6	37.7	36.4	34.5	35.1	38.2	34.6	37.2	34.2	32.4	38.8	35.3
Oil exporters	38.6	41.8	41.5	41.1	39.0	35.5	34.9	36.9	34.7	31.5	33.9	37.8	34.0	39.6	35.6	33.1	36.8	36.0
Remaining countries	37.9	50.5	55.5	54.1	52.6	48.1	46.2	38.9	38.6	38.7	36.7	38.8	35.4	33.7	32.2	31.4	41.8	34.3
DEVELOPING COUNTRIES	22.0	24.1	24.8	24.7	23.5	23.0	24.9	24.3	22.8	22.5	21.7	21.4	20.5	20.5	19.2	19.0	22.4	20.1
Sub-Saharan Africa	27.2	27.0	28.4	27.2	26.6	27.1	27.3	28.6	28.1	28.3	27.5	26.7	29.0	28.7	28.4	26.9	27.7	27.9
Asia	23.4	23.3	23.3	22.8	22.0	22.2	22.7	21.0	19.7	19.7	19.6	18.7	17.9	17.2	16.1	15.6	20.3	17.1
Western Hemisphere	12.2	14.9	15.2	15.1	14.0	14.8	21.0	22.4	20.7	20.6	18.0	17.2	17.0	17.3	18.2	19.7	17.4	17.9
COUNTRIES IN TRANSITION	...	...	27.7	26.9	27.0	28.7	28.9	28.5	28.0	27.9	30.3	42.9	35.1	30.1	30.4	25.3	...	32.7
INDUSTRIAL COUNTRIES	24.2	24.9	26.2	26.3	25.7	25.8	24.9	24.4	23.6	23.5	24.1	24.2	25.0	25.4	24.5	24.2	24.8	24.7
2. Total Revenue and Grants																		
MENA	38.7	41.2	38.5	36.7	34.2	32.1	28.0	27.7	25.4	27.7	28.6	28.2	29.2	30.3	28.7	28.2	31.5	28.9
Oil exporters	46.5	44.5	38.9	36.2	33.9	31.2	24.8	27.3	24.2	27.7	29.4	28.9	28.2	31.3	29.1	29.0	31.9	29.3
Remaining countries	26.4	36.0	37.9	37.5	34.7	33.6	32.4	28.4	26.9	27.6	27.4	27.2	30.6	28.9	28.1	27.2	30.7	28.4
DEVELOPING COUNTRIES	19.7	20.0	19.5	19.6	19.1	18.9	19.4	18.7	17.6	18.4	18.9	18.0	17.7	17.6	17.0	16.9	18.6	17.4
Sub-Saharan Africa	20.0	20.0	21.7	21.4	21.5	21.8	21.8	20.9	20.5	21.6	20.9	20.3	20.3	20.5	21.4	21.9	21.0	20.9
Asia	19.7	19.7	18.8	19.1	18.9	19.0	18.3	17.2	16.4	16.8	16.9	16.1	15.3	14.8	14.2	13.9	17.2	14.9
Western Hemisphere	10.8	11.5	10.6	11.0	10.7	11.5	16.1	16.4	15.8	16.6	17.8	16.9	16.7	17.1	17.9	18.4	14.7	17.4
COUNTRIES IN TRANSITION	...	...	25.7	25.0	25.3	26.8	26.9	26.5	25.7	25.3	25.8	33.0	22.8	23.5	23.1	21.6	...	24.8
INDUSTRIAL COUNTRIES	20.9	21.4	21.4	21.0	20.9	21.2	20.8	21.2	21.0	21.2	21.4	21.2	20.9	20.9	20.7	21.0	21.1	20.9
3. Central Government Fiscal Balance																		
MENA	0.3	-4.1	-8.4	-9.4	-10.1	-8.3	-11.6	-10.0	-11.0	-6.9	-6.5	-10.0	-5.4	-6.9	-5.5	-4.2	-7.4	-6.4
Oil exporters	7.9	2.7	-2.6	-4.9	-5.2	-4.3	-10.1	-9.7	-10.5	-3.8	-4.5	-8.9	-5.8	-8.4	-6.6	-4.1	-4.9	-6.8
Remaining countries	-11.6	-14.5	-17.6	-16.6	-17.9	-14.6	-13.7	-10.5	-11.7	-11.0	-9.3	-11.6	-4.7	-4.8	-4.1	-4.3	-11.2	-5.9
DEVELOPING COUNTRIES	-1.6	-4.7	-5.8	-5.4	-4.9	-4.7	-6.0	-5.7	-5.4	-4.2	-2.9	-3.4	-2.8	-3.0	-2.4	-2.1	-4.1	-2.7
Sub-Saharan Africa	-7.2	-6.9	-6.6	-5.8	-5.1	-5.2	-5.5	-7.8	-7.5	-6.7	-6.7	-6.4	-8.7	-8.2	-6.9	-5.0	-6.7	-7.0
Asia	-3.7	-3.7	-4.5	-3.7	-3.0	-3.3	-4.4	-3.8	-3.3	-2.9	-2.7	-2.6	-2.5	-2.4	-1.9	-1.7	-3.1	-2.2
Western Hemisphere	-1.4	-3.4	-4.6	-4.1	-3.2	-3.4	-4.9	-6.0	-4.9	-4.0	-0.2	-0.3	-0.3	-0.1	-0.3	-1.3	-2.7	-0.5
COUNTRIES IN TRANSITION	...	...	-2.0	-1.8	-1.6	-1.8	-2.0	-2.0	-2.2	-2.6	-4.5	-9.8	-12.4	-6.5	-7.2	-3.7	...	-7.9
INDUSTRIAL COUNTRIES	-3.3	-3.5	-4.8	-5.3	-4.8	-4.6	-4.1	-3.2	-2.6	-2.3	-2.7	-3.1	-4.2	-4.5	-3.8	-3.3	-3.7	-3.8

Source: IMF, WEO database (April 1997).

The oil exporters

To understand the expenditure structure of the oil producing countries, it is important to recognize a number of the characteristics of these countries. Because of the accrual to the governments of the proceeds from the exports of petroleum—a national resource—governments are placed in a position to play an important distributive role. Thus, a large portion of oil revenue is channeled to the population through the provision of employment by the governments, direct or indirect subsidies and transfers, public development projects, and other diverse mechanisms. Governments are also responsible for converting oil wealth into human and physical capital, as well as into foreign assets to maintain a desired level of aggregate income and consumption after the exhaustion of petroleum reserves.

During 1980-95, government expenditures amounted on average to about 37 percent of GDP. In the 1990s, roughly 80 percent of expenditures have been for current outlays.[16] Expenditures on education and defense in the MENA region have been high by international standards. However, a number of observers have noted that the efficiency of investment in education in the MENA region has been very low and outlays on education have not contributed to productivity in a substantial way.[17] Among current expenditures, except in Algeria and Kuwait, explicit budgetary subsidies have been small. However, large implicit subsidies have been effected through a number of channels, including through the high salaries and benefits paid to public sector employees (which in a number of countries stand significantly above private sector ones), subsidized loans, the provision of a number of goods and services below cost, agricultural subsidies, and other generous entitlements and transfers. Governments' welfare policy has also been reflected in public sector employment and wages. An implicit policy in many of these countries is that the government acts as an employer of first resort providing work for a large proportion of the labor force. Moreover, in the Gulf Cooperation Council (GCC) countries,[18] wages and benefit packages in the public sector are substantially higher than those in the private sector.[19]

---

[16]To avoid distortion, this average excludes Kuwait where expenditures during 1991-95 were biased upward by large reconstruction outlays.

[17]Overemphasis of tertiary education at the expense of primary and secondary education, as well as inadequate incentives to maximize returns from investments in human capital might be factors underlying this. See Shafik (1994).

[18]The GCC consists of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the U.A.E.

[19]See Shaban, Assaad, and Al-Qudsi (1994).

The non-oil-exporting countries

In non-oil-exporting countries of the MENA region, the average ratio of government expenditures and net lending to GDP was 42 percent during 1980-95. This large share was partly a reflection of the inward-oriented development strategy that many MENA countries had adopted in the 1960s and the 1970s, as well as large defense expenditures. The governments of the non-oil MENA countries invested in nearly all sectors of the economy, either directly or through net lending to government owned and/or controlled enterprises which also had budgetary implications. Capital expenditures and net lending thus made up a large part of the budget in non-oil-exporting countries; on average, they ranged between one-third of the overall budget in Syria and one-eighth in Israel.[20]

Governments in non-oil MENA countries have also been very involved in income redistribution and the provision of social services with budgetary implication through subsidies and transfers. Such expenditures were particularly large in Israel and Tunisia. The data on the functional breakdown of expenditures, while incomplete, indicate that the non-oil MENA governments spent more on education than on health, with expenditures on the former often being three or more times larger than on the latter. As in the oil-producing countries, governments in the non-oil countries were also the largest employers in the economy. The wage bill, thus, made up between one-third (Morocco) and one-sixth (Jordan) of total government expenditures.

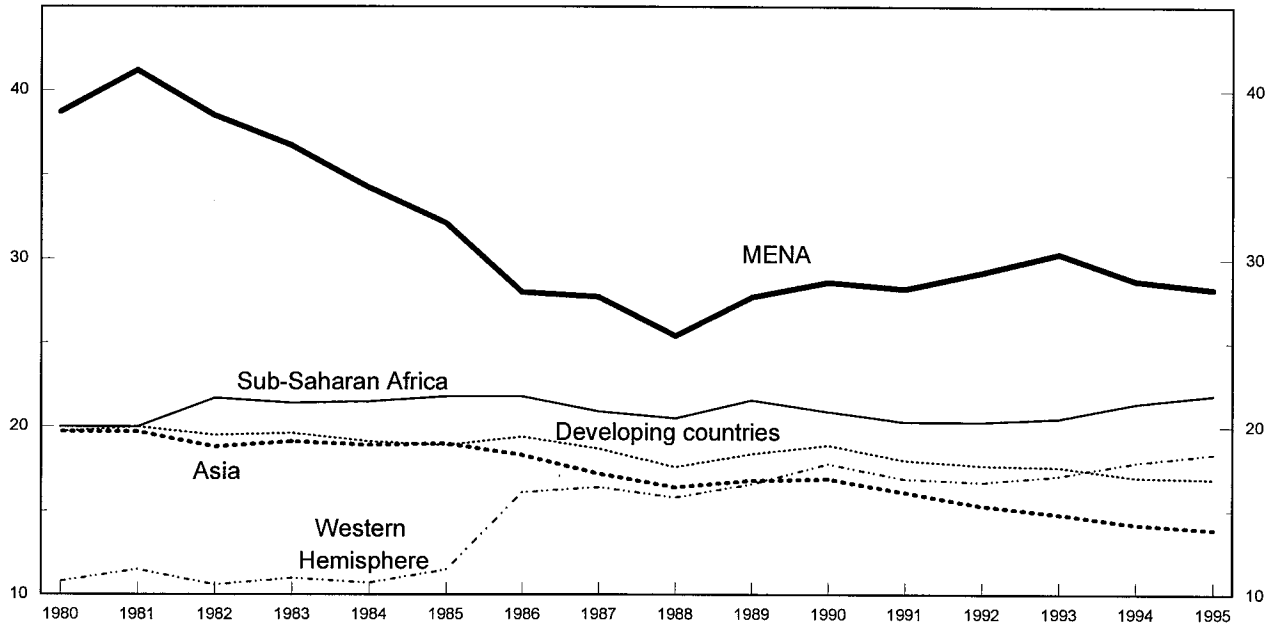
B. The Structure of Revenues

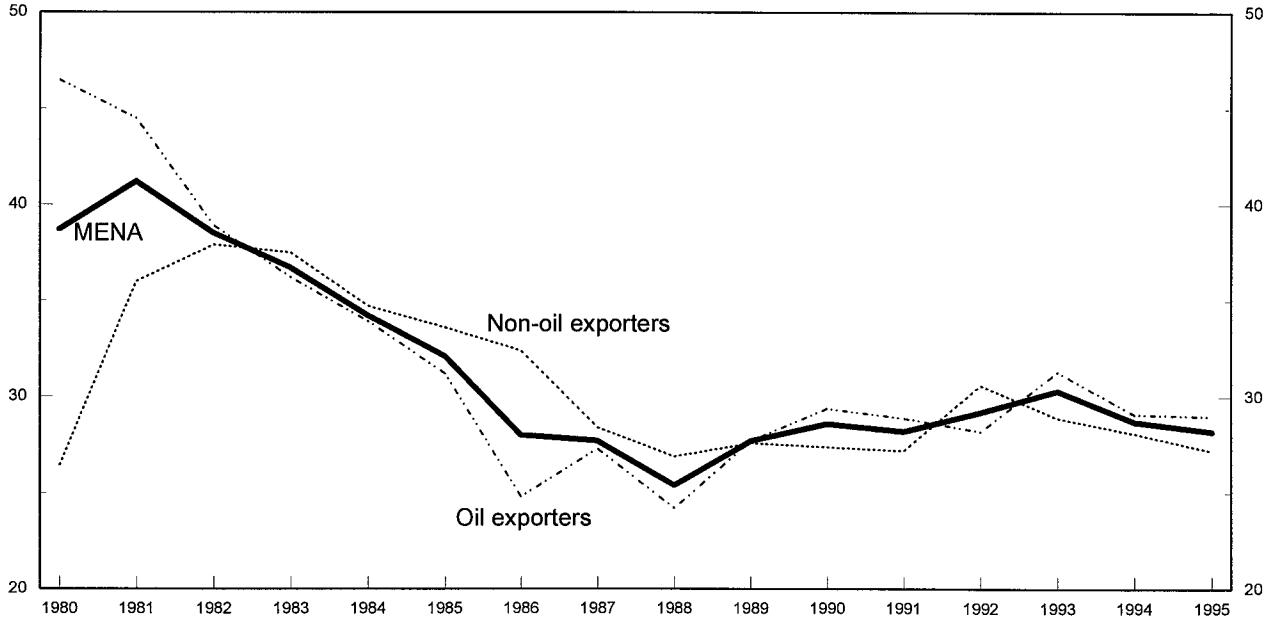
Government revenues in terms of GDP have been high in the MENA region relative to other regions of the world. These governments secured revenues averaging 31.5 percent of GDP during 1980-95, compared with about 19 percent in developing countries as a group, and about 21 percent in the industrial countries (Chart 7). However, the revenues of the MENA governments have been significantly more volatile than those in any other region in the world. During 1980-95, government revenues as a share of GDP ranged between 25.4 and 41.2 percent. The range of revenues for the oil exporters was even larger. During the same period, the governments in developing countries as a whole collected revenues in the range of 16.9 to 20.0 percent of GDP, while in the industrial countries revenues fluctuated between 20.7 and 21.4 percent of GDP.

---

[20]Lebanon, indeed, was a special case as the government's share in the total gross fixed capital formation was the result of the reconstruction efforts since the end of a long civil war. Traditionally, the Lebanese government had pursued a much less active role in the economy than other governments in the region. See Eken et al (1995).

Chart 7
Developing Countries and the MENA Region
Total Revenues and Grants, 1980-95
(In percent of GDP)





Source: World Economic Outlook.

The oil exporters

The revenue structure of the oil exporting countries is dominated by their large oil sectors.[21] During 1991-95, oil earnings made up, on average, over 60 percent of the budgetary revenue of the nine oil-producing countries of MENA.[22] However, while sizable, oil revenues have been very volatile; such volatility has also affected non-oil revenues.[23]

The volatile nature of oil prices and, therefore, of government revenues render the public finances of the petroleum exporters highly vulnerable to exogenous terms of trade shocks and pose a number of problems for policy makers. They have to: (i) distinguish between temporary and permanent shocks to oil revenues and to adjust expenditures accordingly; and (ii) decide whether to devise and rely on formal or informal mechanisms to draw on to smooth out expenditures in the face of fluctuating oil receipts. In a number of the GCC countries, despite the absence of a formal fiscal stabilization facility, some of these functions are performed by their government investment offices that have been set up largely for the investment of a portion of the oil revenues.

Among non-oil revenues, the GCC countries rely largely on nontaxes; tax revenue is small.[24] During 1991-95, direct taxes generally provided less revenue than indirect taxes; furthermore, revenues from taxation of personal and corporate income were low. Reliance on trade taxation is also very limited.[25] With the exception of Algeria, there is almost no recourse to a broad-based tax, such as the VAT. In most countries, there are a number of specific fees and charges on some goods and services. As indicated above, several of the GCC countries, as well as Libya, have invested a portion of their oil export earnings into portfolios of financial

---

[21]For an analysis of the economies of the GCC countries, see Sassanpour (1996).

[22]Throughout this paper, oil revenues are defined to cover revenues for the entire oil and gas sector.

[23]In a number of ways, economic activity in the non-oil sector is closely linked with the receipt and expenditure of oil revenues by the governments. Hence, the base for non-oil revenues broadly expands and contracts with swings in oil-export earnings.

[24]In 1994 in the oil exporters of MENA (except for Libya, Qatar, and the U.A.E. for which data were not available) tax revenue amounted to 8.7 percent of GDP, which is low by international standards. However, it should be noted that non-oil GDP is likely to be a more appropriate measure of the tax base in the oil economies, and that the tax to GDP ratio understates the tax effort.

[25]Algeria is the country with the highest revenues from trade taxes (5 percent of GDP in 1994). In most other oil producers, trade taxes ranged between 1-2 percent of GDP in 1994.

assets abroad and the revenue from these assets typically make up a part of their budgetary earnings. Overall, the elasticity of taxes vis-à-vis non-oil GDP has been declining.

As noted before, growth depends in part on the incentives facing economic agents in their productive activities including through personal and corporate income taxes, the taxation of raw material and intermediate inputs—which in the MENA countries are in large part imported—and export taxes. Table 2 provides information on rates of corporate and personal income taxation, as well as taxes on imports and exports. With the exception of Libya, there is no visible bias in the tax systems of oil exporters against exports. In the GCC countries, although maximum import tariff rates are high, in practice the import regimes are liberal and the effective duty rates are small; Algeria, Iran, and Libya, on the other hand, have more restrictive import taxes. In most of the GCC countries, there is very limited taxation of income.

The non-oil-exporting countries

In the non-oil MENA economies, the bulk of government revenues (defined to exclude foreign grants) is collected through indirect taxes. These taxes contributed between 40 and 60 percent of all government revenues during 1991-95. Egypt, with a contribution of indirect taxes to total revenues of only about one fourth, was an exception. In the opposite extreme is Morocco, where indirect taxes made up a large portion of total revenue. Trade-related taxes have been an important element of indirect taxes. At the beginning of the 1980s, revenues from tariffs levied on imports were the single most important indirect tax source in many countries.[26] Subsequently, some countries introduced a general sales tax or a VAT, and the trade tax systems have also been reformed so that the tax burden on imports has been reduced.[27] Revenues related to taxes on exports and excises on the production of exportable goods were also a relatively large source of revenue in some countries.

Income taxes have generally provided for a small share of revenues. In Jordan, for example, they generated only 10 percent of total revenues during 1991-95. Only in Israel and Tunisia did direct taxes contribute more than 30 percent of total revenues in the period 1991-95. In countries with a large public sector—that is the central government, local authorities, and public agencies and enterprises—the distinction between direct taxes and indirect taxes is sometimes blurred since profit transfers from public entities, which have been a source of large revenues, are often counted as non-tax revenues. In Egypt, for example, the government-owned oil company and the Suez Canal Authority transferred profits in the order of 5 percent of GDP to the central government. Similarly, in Jordan, the operating surplus from post and

---

[26]Note that here the discussion is based on receipts excluding foreign grants.

[27]Morocco (1986), Tunisia (1988), and Mauritania (1995) introduced a VAT, Egypt (1991) introduced a domestic sales tax, and Jordan (1994 converted a consumption tax to a general sales tax (GST). In Israel, a VAT system has been in place since the 1980s.

Table 2. Tax System in MENA Countries

(In percent)

	Import Duties (Range)	Import Duties (Effective)	Export Duties (Range)	Corporate Income Tax Rate 1/	Individual Income Tax Rate
			(Oil-exporting countries)		
Algeria	3-70	15.1	0	33-38	0-50
Bahrain	5-125 2/	5.8	0	0	0
Iran	5-100	4.0	0	12-54	12-54
Kuwait	0-100 2/	3.8	0	0-55	0
Libya	0-250	8.9	50 3/	20-60	8-35
Oman	0-100 2/	2.7	0	0-50	0
Qatar	0-100 2/	4.0	0	0-35	0
Saudi Arabia	0-50 2/	10.0	0	25-45	0
U.A.E.	0-50 2/	1.0	0	0-50	0
			(Non-oil-exporting countries)		
Djibouti	0-78	37.0	10.0	20	2-32
Egypt	5-70 4/	17.3	0	32-40.6	20-32
Israel	0-240	1.4	0	36	0-48
Jordan	0-200	8.2	0	38-50	5-45
Lebanon	0-100	11.3	0	10	2-10
Mauritania	0-37 5/	8.1	0-20	40	0-55
Morocco	0-45	16.2	0 6/	36 7/	0-46
Sudan	0-250	13.8	5, 10	25-50	0-30
Syria	0-200	20.1	22.0 8/	11-58	5-15
Tunisia	0-43 9/	9.7	1.5 10/	35 11/	0-35 12/
Yemen	30 13/	8.0	0	35	4-16 (3-22) 14/

Source: IMF.

1/ Excludes oil companies.

2/ The maximum tariff rate applies only to one or two commodities and is otherwise relatively low. For example, in Saudi Arabia, excluding duties on cigarettes, the maximum tariff rate is 20 percent.

3/ Excludes some specific export taxes on agricultural products.

4/ Tariffs on certain products, e.g., alcohol and cars, substantially exceed the maximum tariff rate.

5/ In January 1997, Mauritania embarked on a three-year import tax reform. For the first year (1997), the highest combined rate was reduced from 150 to 37 percent.

6/ There is a specific tax on exports of crude phosphate.

7/ Flat rate on profits. There is also a minimum turnover tax of 0.5 percent.

8/ Applies to cotton exports only.

9/ In addition, there is a 10 percent complementary duty on imports to be eliminated effective January 1998, as well as a 2 percent service fee.

10/ Export service fee.

11/ There is also a reduced rate of 10 percent for some types of activities. In addition, there is a 0.5 percent turnover tax (with ceilings).

12/ There is also a 6.5 percent social security tax and a 2 percent vocational training tax.

13/ There are also two service fees of 0.4 percent and 2 percent.

14/ Figures in parentheses apply to professional income rather than income from wages and salaries.

telephone services was an important nontax revenue source. In general, nontax revenues have been large in some countries, providing between 10 and 50 percent of total revenues on average during the period 1991-95.

In view of the relatively low share of direct taxes in total revenue, which generally tend to be more distortionary than indirect taxes, it is quite likely that the growth-regressing effect of the tax systems in the non-oil-exporting countries had been limited. However, the large share of trade taxes, including import duties, could possibly have been an important disincentive for the development of sectors which were dependent on imports, in particular the manufacturing sector. Revenue systems in many non-oil countries have also been characterized by a number of other weaknesses. In some countries, the share of both direct and indirect tax revenues in GDP has been stagnating or decreasing since the early 1980s, the many reform efforts notwithstanding. Furthermore, effective tax and tariff rates have been quite low in general despite high legal rates, reflecting numerous exemptions.

V. FISCAL IMBALANCES AND MACROECONOMIC INSTABILITY

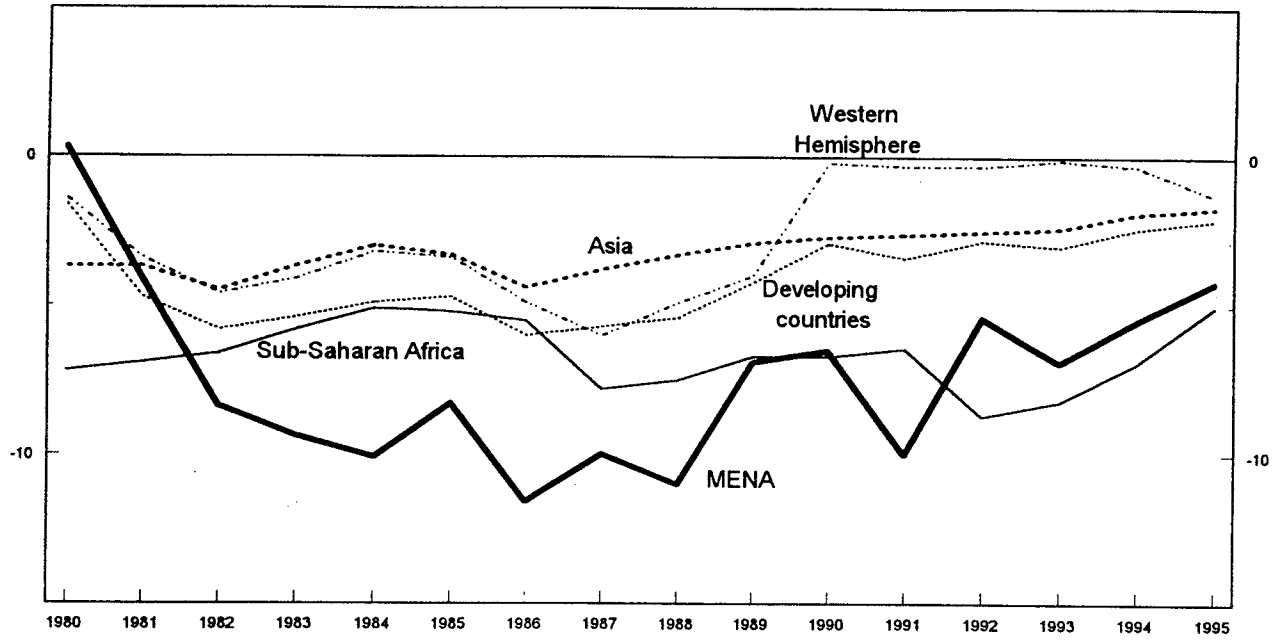
In the MENA region, not only had the governments commanded large resources and played a dominant role in the economy, they have also had large imbalances in their finances—albeit recent years have witnessed a sharp decline in such imbalances. An important question suggests itself: did these imbalances contribute to macroeconomic instability and thus harm growth? Before attempting to answer this question, we examine the magnitude and nature of the fiscal imbalances in the MENA countries.

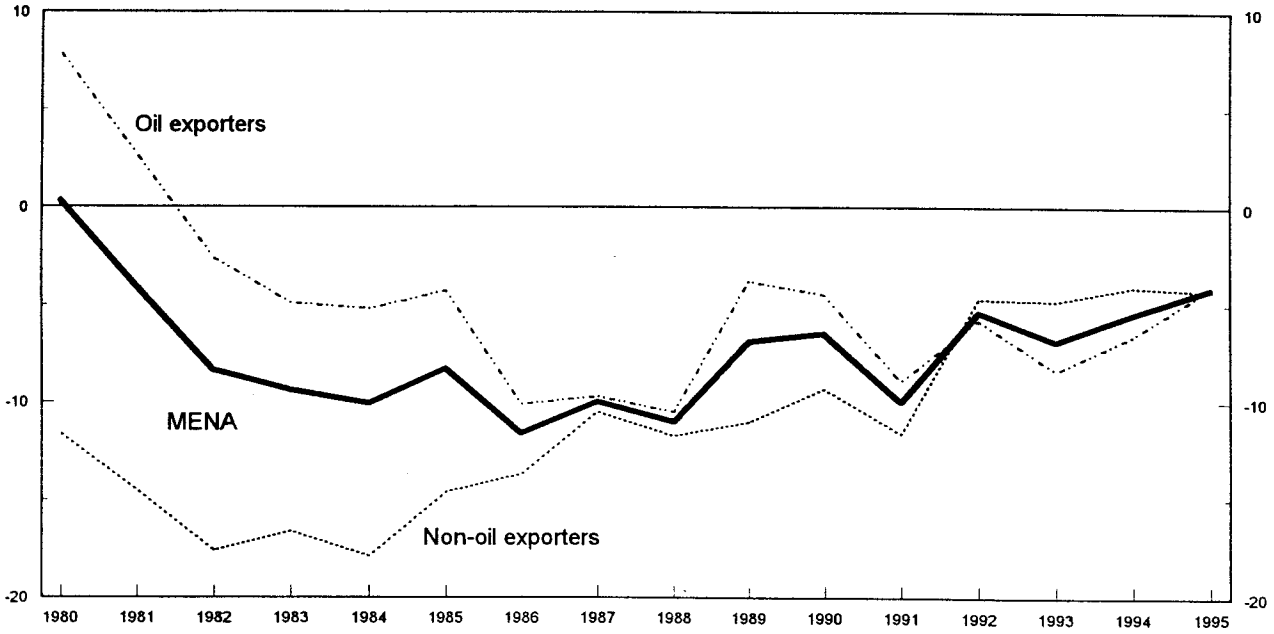
A. Fiscal Imbalances in the MENA Countries

During 1980-95, the fiscal imbalances in the MENA region were, on average, larger than those in all other regional groupings, but demonstrated an improving trend since the mid-1980s (Chart 8). During the same period, fiscal deficits in the region amounted to 7.4 percent of GDP, on average, while the average deficit to GDP ratios were 4.1 percent in the developing countries as a whole, 3.1 percent in the Asian, and 2.7 percent in the Western Hemisphere countries.

In the non-oil-exporting MENA countries, on average, fiscal deficits during 1980-95 amounted to 11.2 percent of GDP, almost three times the level registered in the developing countries as a whole and twice the level in the African countries. In the oil-exporting countries, fiscal imbalances were on average lower than those in non-oil exporting countries during 1980–95, with an average fiscal deficit to GDP ratio of 4 percent. However, during this period, their fiscal position registered larger fluctuations than that of the non-oil countries or other country groups in the world. This variability reflected the vulnerability of government revenues to the volatility in the oil market, the very limited reliance on tax revenues, and the asymmetry in the adjustment of expenditure, especially current ones, to changes in oil revenues.

Chart 8
Developing Countries and the MENA Region
Central Government Fiscal Balance, 1980-95
(In percent of GDP)





Source: World Economic Outlook.

B. Macroeconomic Aspects of the Large Imbalances

Large fiscal imbalances in the MENA countries were translated into sizable financing needs of the government and were correlated with various indicators of macroeconomic instability. It could thus be argued that these imbalances had adverse consequences for the broader macroeconomic situation and that such an environment could be a factor contributing to the low savings rate and the disappointing growth performance of the MENA region.

Large fiscal imbalances were financed through various methods:

- *Inflationary financing* was significant only in a few non-oil-exporting countries. On average, revenues from seignorage amounted to 5.0 percent of GDP during the period 1981-95 in non-oil-exporting countries, and 1.2 percent of GDP in the oil-producing countries (Table 3). Thus, the inflation performance of the MENA region has been relatively favorable despite much larger fiscal imbalances compared with those in other regions.

- *Financing through the domestic banking system other than the central bank* played a major role especially in the non-oil-exporting countries. While less inflationary than direct central bank financing, this channel is likely to have had adverse implications for private investment and private sector financing through higher interest rates and/or unavailability of funds.

- Financing through *official borrowing and international capital markets* was also important in non-oil-exporting countries. Although such financing is less inflationary, a rapid and prolonged buildup of external debt typically results in a heavy debt servicing burden, especially if nonconcessional, and increases uncertainty about future macroeconomic policies because of anticipated problems in servicing the debt.[28]

- Financing through *drawdown of external assets*, be it the foreign exchange reserves of the central bank or the external assets of a government agency, is probably the most expedient method of financing in the short run. It can, however, contribute to uncertainties about future policies if the decline in external assets is large and persistent since markets will anticipate an eventual recourse to the other financing methods mentioned above. Drawing on external assets was particularly relevant for the oil-exporting countries which started to use their accumulated wealth of the 1970s from the mid-1980s onwards and until recently.

In the MENA region, fiscal imbalances were correlated with various indicators of macroeconomic instability (Table 4). Furthermore, a comparison of the correlation coefficients between oil- and non-oil-exporting economies confirms some important differences in the

---

[28]Prior to the fiscal adjustment efforts, debt service payments as a percent of exports of goods and services in the non-oil-exporting countries amounted to about 33 percent, compared with less than 20 percent in the developing countries as a whole.

Table 3. Indicators of Macroeconomic Stability, 1981-95

	Inflation 1/ Average 1981-95	Inflation Standard Deviation	Fiscal balance 2/ Average 1981-95	Current account 3/ Average 1981-95	Terms of trade Average 1981-95	Seignorage 4/ Average 1981-95
MENA	16.1	2.0	-7.9	-1.8	-2.6	3.3
MENA						
Oil exporting	12.3	5.4	-5.8	-1.2	-2.3	1.2
Others	22.3	6.2	-11.1	-4.0	-0.4	5.0
Developing Countries	37.3	12.6	-4.2	-1.4	-1.1	...
Sub-Saharan Africa	20.8	8.3	-6.7	-2.8	-1.0	...
Asia	8.5	2.4	-3.1	-0.3	0.4	...
Western Hemisphere	161.1	110.5	-2.6	-2.0	-2.1	...
Industrial Countries	4.5	1.5	-3.8	-0.4	1.1	...

Sources: IMF World Economic Outlook; and staff calculations.

1/ Annual changes in percent.
2/ In percent of GDP
3/ In percent of GDP
4/ Change in reserve money as percent of GDP

Table 4. Correlations among Fiscal Imbalance, Inflation, and other Indicators of Macroeconomic Stability, 1981-95

Correlation coefficients between and:	Overall balance Inflation	Overall balance Current Account	Overall balance Seignorage	Overall balance Bank Financing	Inflation Current Account
MENA:					
Oil exporting	-0.1	0.8	0.5	-0.4	-0.2
Others	-0.7	0.5	-0.7	-0.7	-0.3
Developing Countries	0.3	0.03	...	...	0.6
Sub-Saharan Africa	-0.3	0.5	...	...	-0.3
Asia	0.6	0.2	...	...	0.1
Western Hemisphere	0.3	-0.1	...	...	0.4
Industrial Countries	-0.1	-0.1	...	...	-0.3

Sources: IMF; and staff calculations.

financing of the overall fiscal imbalances. First, the generally negative estimates of correlation coefficients between overall fiscal imbalances and inflation rates reported in Table 4 could point to an adverse impact of fiscal imbalances for macroeconomic stability as proxied by the rate of inflation. This relationship appears to be more relevant for non-oil-exporting countries than for oil-exporting ones, reflecting primarily the implications of the higher degree of inflationary budget financing in these countries. Furthermore, the correlation coefficient between the overall fiscal balance and bank financing is strongly negative for the non-oil-exporting countries, which could suggest more crowding out effects on the private sector in non-oil-exporting economies than in oil-exporting ones. Second, the large fiscal imbalances and the availability of substantial external financing could have contributed to relatively large external imbalances as the generally large and positive correlation coefficients between the overall fiscal balance and the external current account in Table 4 show. The correlation coefficients are generally larger in magnitude in the oil-exporting countries than in the non-oil-exporting countries. This could reflect the relatively more openness of the oil-exporting countries as well as the dependency of government revenues on oil export receipts in these countries. Finally, the correlation coefficients between the inflation rate and the external current account balance reported in Table 4 are mostly negative, suggesting that there are also linkages between macroeconomic instability in general and external imbalances.

An aggregate, rough indicator of macroeconomic instability (the unweighted sum of the mean inflation rate, the standard deviation of inflation, mean budget and external current account deficits as percent of GDP, and mean terms-of-trade changes) was derived to compare the overall macroeconomic environment in MENA to that in other regions during 1981-95 (Table 5). A comparison of this indicator across regions shows that macroeconomic instability in the MENA region was worse than in Asian countries, but better than in Sub-Saharan African and Western Hemisphere countries. Interestingly, during the same period of analysis, real GDP growth performance of the MENA region was worse than that of the Asian region but better than those of the Sub-Saharan African and Western Hemisphere regions. Within the MENA region, the macroeconomic instability measured by this indicator was on average worse in non-oil-exporting countries than in oil-exporting countries. However, reflecting the policy adjustments, the overall macroeconomic stability index for non-oil exporting countries improved steadily during 1981-95. These findings corroborate the theoretical expectations and empirical results in the literature regarding the relationship between growth and macroeconomic instability, which, in most cases, was accounted for by fiscal imbalances.

VI. FISCAL ADJUSTMENT AND ITS PATTERN

Almost all of the MENA countries underwent some fiscal adjustment during the period 1980-95.[29] In general, expenditure reductions contributed more than revenue increases to reducing fiscal imbalances, and capital expenditures were often reduced earlier and to a larger extent than current expenditure in the adjustment process.

---

[29]Fiscal adjustment is defined in terms of the overall fiscal balance of the government.

Table 5. Index of Macroeconomic Stability 1/

	Stability Index 1981-95	Stability Index 1981-85	Stability Index 1986-90	Stability Index 1991-95
MENA	30.7	24.7	32.1	34.4
Oil-exporting	26.9	11.1	25.5	38.0
Others	44.7	59.8	35.9	33.2
Developing Countries	56.6	41.9	69.9	51.3
Sub-Saharan Africa	39.3	25.5	30.5	46.9
Asia	13.9	12.6	14.3	14.5
Western Hemispher	278.4	133.6	399.0	223.4
Industrial Countries	9.7	13.8	6.5	6.5

Sources: IMF; and staff calculations.

1/ The unweighted sum of the mean inflation rate, the standard deviation of inflation, mean budget and external current account deficits, and mean terms-of-trade changes.

A. Overall Fiscal Adjustment

In the case of many non-oil-exporting countries, following the increases in costs and limitations in the availability of external financing during the first half of the 1980s as well as the deterioration of the world market prices of primary commodities (such as phosphates and potash) the large fiscal deficits, mostly structural, became difficult to sustain. Since the mid-1980s, the non-oil-exporting countries have made important progress in addressing fiscal imbalances, and brought their fiscal deficit from about 18 percent of GDP in 1984 to 4 percent of GDP in 1995. However, progress has not been uniform. Israel, Mauritania, Morocco, Syria, and Tunisia were early adjusters, while Egypt and Jordan undertook significant adjustment in the 1990s.[30] In Lebanon and Yemen, civil unrest prevented any systematic fiscal adjustment efforts before the early 1990s. The fiscal adjustment in non-oil countries has led to an improvement in the macroeconomic environment in these countries, as suggested by movements in aggregate indicators of stability reported in Table 5.

In the oil-exporting countries, following the decline in the external terms of trade and in oil revenues in the early 1980s, fiscal adjustment occurred with some lag under what could be described as a partial feedback rule, where expenditures were cut only partially in response to external terms of trade shocks. Indeed, the situation in these countries was not as dramatic as in some non-oil exporters given their considerable accumulation of wealth. For Algeria and Iran, the larger, high-absorber countries in the group of oil-exporting countries, the situation was worse than for the GCC countries since they were net-debtor countries. A more determined fiscal adjustment in the oil-exporting countries in the 1990s was triggered by the regional crisis of 1990-91 and recognition of the need for addressing the long-term problems to prevent a deterioration in living standards. During 1993-95, adjustment was strong with the budget deficit of oil-exporting countries declining from 8.4 percent to 4.1 percent of GDP.

B. The Pattern of Fiscal Adjustment

There were many similarities in the pattern of fiscal adjustment across the MENA countries. The following stylized facts summarize the pattern of fiscal adjustment in the MENA countries over the period 1980-95:[31]

- *The contribution of expenditure cuts and revenue increases to fiscal adjustment in the MENA countries was asymmetrical.*

Expenditure reductions contributed more than revenue increases (excluding oil revenues) to the improvements in the overall budgetary balance of the MENA countries. In

---

[30]See de Callatay and Mansur (1996), Nsouli et al (1993), and Nsouli et al (1995).

[31]The pattern of fiscal adjustment described below is similar to that found in the sample of countries covered in the study by Mackenzie et al (1997).

fact, total revenues as a percent of GDP stayed more or less constant rather than increasing during the period 1986-95. This reflected the slow implementation of structural reforms, particularly in the areas of tax administration and structure, in the non-oil exporters, and the lack of substantial reform measures, particularly to broaden the revenue base, in oil-exporting countries. In non-oil-exporting countries that implemented reforms, measures often aimed not only at generating revenues but also at simplifying and harmonizing the tax structure, as well as removing severe distortions. For example, the income tax system was simplified and marginal tax rates were reduced in Egypt, Israel, Jordan, and Tunisia. For these reasons, the ratios of both direct and indirect taxes to GDP increased only in Jordan and Morocco, and the ratio of direct taxes to GDP increased in Tunisia.

- *Capital expenditures bore the brunt of expenditure adjustment in the initial stages of fiscal adjustment.*

In the initial stage of fiscal adjustment, governments typically resorted to expenditure reductions since they can be implemented either immediately or only with short delays. Moreover, capital expenditures were often reduced earlier and to a larger extent since current expenditures (for example, interest payments, or wages and salaries) are frequently subject to rigidities as well as political sensitivities. The cuts in capital expenditures were particularly large in the countries that had high capital expenditure to GDP ratios at the beginning of the 1980s.[32] Algeria, Bahrain, Egypt, Libya, and Mauritania belong to this group of countries. Reflecting reductions in net lending to public sector entities and to the private sector and rationalization of public sector investment projects, the share of capital expenditures to GDP fell steadily to permanently lower levels during 1980-95 in most of the MENA countries.

- *Reductions in current expenditures also contributed to lower budget deficits in the MENA countries.*

Not only capital, but also current expenditures were subject to a downward adjustment. Given the difficulties mentioned above, cuts in current expenditures were usually implemented with a lag. The contribution from such cuts to the reduction in fiscal deficits was large in Egypt, Israel, Libya, Mauritania, and Sudan. In Israel, current expenditures were reduced dramatically from an average of 77.4 percent of GDP in the years 1981–85 to an average of 39.1 percent in the period 1991–94. The cuts in current expenditures were mainly in defense outlays (Israel and Egypt) and the streamlining of subsidy systems and lowering of transfers (Egypt, Israel, Morocco and Saudi Arabia). Unfortunately, it is very difficult to assess the degree to which current expenditures supporting economic growth were cut. Available data suggest that in most cases these expenditures were reduced in the adjustment process: the ratios of education and/or health expenditures to GDP often decreased during the years 1986–95. A few countries (for example Egypt and Morocco) undergoing fiscal

---

[32]In some countries (for example Saudi Arabia), the decline in capital expenditures partly reflected the completion of large infrastructure projects that were initiated in the 1970s.

adjustment were able to preserve such expenditures at the levels prevailing in the mid-1980s. The containment of the wage bill in most of the MENA countries had been difficult to achieve.

VII. AN EMPIRICAL EXAMINATION OF FISCAL POLICY AND GROWTH IN MENA

The experience in the MENA region raises questions about the implications of fiscal policy for the growth performance. Have the level and composition of expenditures mattered for their per capita growth? Have the level and composition of revenues had an effect on per capita growth? Has the level of the budget deficit had an impact on per capita growth? To answer these questions, the impact of fiscal policy on growth has been investigated empirically using a panel data set for the period 1980–95.

A. Specification of the Model

The empirical investigation of the impact of fiscal policy on growth in the MENA countries is undertaken in two steps. First, a parsimonious base model using panel data in the spirit of Mankiw et al (1992), which is based on a linearized neoclassical growth model of the path of per capita GDP growth around its steady state, is specified.[33] In Mankiw et al, the evolution of the growth rate in a country between two points in time is explained by the initial level of per capita GDP—the convergence term—and by variables such as the investment to GDP ratio, the population growth rate, proxy variables for the human capital stock, and country specific variables that affect the steady state growth rate.

Data limitations impose an even more parsimonious specification in the case of the MENA countries, as follows:[34]

$$\Delta \ln(y_t^i) = \alpha_1 \ln(y_{t-1}^i) + \alpha_2 \ln(I_t^i/Y_t^i) + \alpha_3 \Delta \ln(P_t^i) + \mu^i + \epsilon_t^i \qquad (1)$$

where: ln stands for the natural logarithm of a variable; i and t are country and time period indices respectively; y is the real per capita GDP in the case of the non-oil exporters and real per capita non-oil GDP in the case of the oil-exporting countries; I represents private investment in nominal terms; Y is nominal GDP in current prices in the case of the non-oil exporters and nominal non-oil GDP in the case of the oil-exporters; and P the consumer price index. μ^i denotes a country-specific constant, and ϵ_t^i is a white-noise residual.

---

[33]See also Cashin (1995) and Knight et al (1996), among others.

[34]Two other standard variables, the primary and secondary school enrollment ratios, which approximate the human capital stock, were included in preliminary estimates but turned out to be statistically insignificant.

It should be emphasized that the dependent variable is different across the two country groups. The analysis of growth performance in the non-oil countries is measured in terms of real per capita total GDP, whereas the analysis for the oil exporters is based on the real per capita non-oil GDP. The distinction between total and non-oil GDP is crucial for the group of the oil exporters. While total GDP is an appropriate measure of the permanent income of the oil exporters, it may obscure important aspects of the impact of fiscal policy on the level of activity in the non-oil sector given the reverse causality between oil sector GDP growth and fiscal policy in these countries.

The first explanatory variable, the lagged value of the natural logarithm of real per capita GDP is the (conditional) convergence term.[35] The coefficient of this variable is expected to be negative since a larger initial GDP indicates that a country is closer to the common steady state growth path of the most advanced countries. The ratio of private investment to GDP is included to take into account the contribution of physical capital accumulation to growth and its coefficient is expected to have a positive sign.[36] The inflation rate captures the degree of macroeconomic stability. Higher values of inflation are associated with a higher degree of instability, and its impact on growth is thus expected to be negative.

In the second step, a set of fiscal policy variables is added to the base model in order to examine the impact of the level and composition of fiscal policy variables on growth. The extended model is, of course, only a reduced form model and not a fully specified structural model. Since no unique satisfactory reduced-form model has yet been identified in the literature, four different equations are estimated. This strategy also allows one to compare the results with those of earlier studies. The first reduced form equation, referred to as (2A), is given by:[37]

$$\Delta\ln(y_t^i) = \alpha_1\ln(y_{t-1}^i) + \alpha_2\ln(I_t^i/Y_t^i) + \alpha_3\Delta\ln(P_t^i) + \alpha_4\ln(E_t^i/Y_t^i) + \alpha_5\ln(CE_t^i/E_t^i) \\ \alpha_6\ln(R_t^i/Y_t^i) + \alpha_7\ln(TR_t^i/R_t^i) + \mu^i + \epsilon_t^i \qquad (2A)$$

---

[35]Conditional convergence is the notion that there is a common steady state growth rate in the world economy (or a region) to which all countries converge after accounting for country-specific factors such as preferences or differences in the human capital stock. The standard neoclassical growth theory, building on Solow (1956) and Swan (1956), predicts unconditional convergence.

[36]Note that private sector investment rather than total investment is used in order to test for the specific effects of government investment (through expenditures) on growth.

[37]This formulation extends the one from Devarajan et al (1996) to capture the impact of the composition of expenditures and revenues.

where:

E/Y: The share of total expenditure in GDP
R/Y: The share of total revenue in GDP
CE/E: The share of current expenditures in total expenditures
TR/R: The share of tax revenues in total revenues in the non-oil exporting countries and the share of non-oil revenues in total revenues in the oil-exporting countries.[38]

The first two variables capture the impact on growth of the *level* of expenditures and revenues as a share of GDP. The latter two capture the impact of the *composition* of expenditures and revenues on growth. As argued in section III, there are no clear theoretical or empirical conclusions on the impact of some of the fiscal policy variables on economic growth. Generally, however, the theoretical and empirical literature have pointed to the possibility of an inverse relationship between current expenditures and growth, while capital expenditures of governments are generally considered to support growth. It follows that α_5 is expected to be negative. The effects of total expenditure and total revenue on growth are theoretically more elusive. However, under the hypothesis that, everything else being equal, relatively larger expenditures contain a large share of unproductive expenditures and larger revenue is characterized by a higher share of distortionary taxes, the coefficients α_4 and α_6 are expected to be negative. The coefficient α_7 should turn out to be negative provided that tax revenue is relatively more distortionary than nontax revenue.

The second and the third reduced form equations, (2B) and (2C), are given by:

$$\Delta\ln(y_t^i) = \alpha_1\ln(y_{t-1}^i) + \alpha_2\ln(I_t^i/Y_t^i) + \alpha_3\Delta\ln(P_t^i) + \alpha_4\ln(CE_t^i/Y_t^i) + \alpha_5\ln(R_t^i/Y_t^i) + \mu^i + \epsilon_t^i \quad \textbf{(2B)}$$

$$\Delta\ln(y_t^i) = \alpha_1\ln(y_{t-1}^i) + \alpha_2\ln(I_t^i/Y_t^i) + \alpha_3\Delta\ln(P_t^i) + \alpha_4\ln(CA_t^i/Y_t^i) + \alpha_5\ln(R_t^i/Y_t^i) + \mu^i + \epsilon_t^i \quad \textbf{(2C)}$$

where, in addition to the variables already described above, the following notation holds:

CE/Y: The share of current expenditures in GDP
CA/Y: The share of capital expenditures in GDP

---

[38]Data on tax revenues were not available for all oil-exporting countries.

Equations (2B) and (2C) test for the specific level effects of current and capital expenditure. They are variants of the empirical models used by Barro (1992), and Easterly and Rebelo (1993), who postulated that one should differentiate between the levels of various expenditure categories when studying the relationship between fiscal policy variables and growth. On the basis of the theoretical and empirical literature cited earlier, one would expect α_4 to be negative if assigned to current expenditure and positive if assigned to capital expenditure.

The last equation (2D) is given by:

$$\Delta\ln(y_t^i) = \alpha_1\ln(y_{t-1}^i) + \alpha_2\ln(I_t^i/Y_t^i) + \alpha_3\Delta\ln(P_t^i) + \alpha_4([R_t^i - E_t^i]/Y_t^i) + \alpha_5\ln(CE_t^i/E_t^i) + \alpha_6\ln(TR_t^i/R_t^i) + \mu^i + \epsilon_t^i \quad \textbf{(2D)}$$

where, in addition to the variables already defined:

[R-E]/Y: The ratio of the overall fiscal balance to GDP

This last equation provides a link between empirical models in which the levels of expenditure and revenue have a direct effect on growth and models in which the levels of expenditure and revenue only matter for growth because of their effects on the overall fiscal balance, which in turn affects growth through the channel of macroeconomic stability/instability. This shift in emphasis can be clearly seen in a comparison of equations (2A) and (2D), which are identical except for the log transformation provided that the restriction $\alpha_4 = -\alpha_6$ in model (2A) holds. This clearly illustrates the assumption underlying equation (2D) that is presented above.

Given the limited number of countries in the MENA region for which data covering the period 1981–95 are available, a panel data set was used. As in Cashin (1995) and Knight et al (1996), this panel data set was constructed with non-overlapping five-year averages for each variable except for the natural logarithm of the initial GDP per capita. Three such five-year averages, for the periods 1981–85, 1986–90, and 1991–95, were used for each country. The time subscript *t* in equations (1) and (2A) to (2D) thus denotes a five-year period. For the initial GDP, the values for the years 1980, 1985, and 1990 were used.

The empirical model was estimated using a fixed-effect estimator that seeks to capture country-specific idiosyncracies such as civil unrest and other noneconomic factors influencing growth.[39] The possibility that growth and fiscal policy are correlated contemporaneously and intertemporarily cannot be excluded, and the coefficients could be biased. Unfortunately, suitable instruments that could have corrected this problem could not be found in the context of the limited sample available for the MENA countries. In this sense, the estimates reported in this paper are only a first step in the empirical research on growth and fiscal policy in the MENA countries.

---

[39]On fixed-effect estimators, see Hsiao (1986) and Baltagi (1995).

B. The Empirical Results

The above-described equations were estimated using two panel data sets, covering the non-oil exporting countries, and the oil-exporting countries. The results for the non-oil-exporting countries turned out to be very different from those for oil-exporting countries. In light of these differences, no attempt was made to estimate the growth equation for all MENA countries. The results are presented in Table 6, and discussed below.

The non-oil exporters

In equation (1), all variables had the expected signs. The negative impact of inflation on growth was statistically insignificant, however. Estimation of equations (2A) through (2D) also yielded evidence that conditional convergence and the positive contribution of private investment to growth are generally statistically significant. Macroeconomic stability as measured by the inflation rate had a mixed and insignificant impact throughout equations (2A) to (2D).

Equation (2A) yielded evidence of a significant inverse relationship between per capita growth rate and the share of total government expenditure in GDP. In equation (2B), we found some evidence of an inverse relationship between the share of current expenditures in GDP and growth, as had previous works such as Barro (1992). Equation (2C) also indicates inverse relationships between the share of government capital outlays in GDP and growth, and the share of government revenues in GDP and growth. Equation (2D) provides evidence of a significant positive relationship between growth and the overall budget balance and corroborates with Fischer's (1993) findings. In this connection, it is worth noting that an F-test for the restriction $\alpha_4 = -\alpha_6$ in equation (2A) could not be rejected.[40] F-tests of the joint significance of the fiscal policy variables were also conducted. The results indicated that tests rejected the hypothesis of the joint insignificance of the fiscal variables in three of the four estimated equations [equations (2A)-(2D)] (at the 10 percent marginal significance level).

The oil-exporting countries

For the oil exporting countries, the basic model in equation (1) performed rather poorly in explaining non-oil GDP growth, although all coefficients had the expected sign. The inclusion of fiscal variables did not improve the fit significantly in all but one equation. Augmenting the basic model in equation (1) with the ratio of current expenditures as a share of non-oil GDP and the ratio of total revenues to non-oil GDP as in equation (2B) provided significant (positive) evidence of a link between current expenditures and growth and between revenues and growth. Specification (2C) that included the share of capital expenditures in non-oil GDP suggests a positive, but statistically insignificant relation between this variable and growth. Equation (2D) suggests that budget deficits had a positive but insignificant effect on non-oil GDP growth.

---

[40]The marginal significance level was 0.16.

Table 6. Explaining Per Capita GDP Growth in MENA Countries 1/

Explanatory Variables	Non-oil Exporting Countries (1)	(2A)	(2B)	(2C)	(2D)	Oil-Exporting Countries 2/ (1)	(2A)	(2B)	(2C)	(2D)
Base variables										
$\ln(y_{t-1})$	-0.005	-0.012	-0.008	-0.005	-0.015	-0.015	-0.028	-0.015	-0.016	-0.028
	(0.006)	(0.004)	(0.005)	(0.004)	(0.006)	(0.055)	(0.063)	(0.037)	(0.05)	(0.074)
$\ln(I/Y)_t$ 3/	0.052	0.065	0.047	0.086	0.063	0.015	-0.168	-0.086	-0.064	-0.065
	(0.031)	(0.024)	(0.025)	(0.027)	(0.035)	(0.037)	(0.147)	(0.042)	(0.056)	(0.083)
$\ln(P_t/P_{t-1})$	-0.002	0.007	0.004	-0.004	0.016	-0.131	-0.181	-0.143	-0.155	-0.26
	(0.011)	(0.007)	(0.009)	(0.007)	(0.012)	(0.164)	(0.180)	(0.110)	(0.205)	(0.217)
Fiscal policy variables										
$\ln(E/Y)_t$		-0.084					0.122			
		(0.027)					(0.135)			
$\ln(CE/Y)_t$			-0.044					0.056		
			(0.035)					(0.030)		
$\ln(CA/Y)_t$				-0.036					0.002	
				(0.011)					(0.055)	
$\ln(CE/E)_t$		0.057			0.017		0.268			-0.057
		(0.181)			(0.271)		(0.662)			(0.798)
$\ln(R/Y)_t$		0.016	-0.011	-0.046			-0.003	0.077	0.085	
		(0.031)	(0.038)	(0.016)			(0.144)	(0.036)	(0.077)	
$\ln(TR/R)_t$		0.006			-0.014		0.002			0.088
		(0.029)			(0.040)		(0.003)			(0.069)
$(B/Y)_t$					0.292					-0.043
					(0.128)					(0.091)
Adjusted R^2	0.290	0.772	0.558	0.761	0.526	-0.176	0.125	0.477	0.031	-0.497
SEE 4/	0.019	0.011	0.015	0.011	0.016	0.030	0.028	0.020	0.027	0.034
F 5/	...	0.04	0.06	0.01	0.16	...	0.43	0.09	0.03	0.67

Source: Staff calculations.

1/ Standard errors are reported in parenthesis.
2/ For oil exporting countries, the real per capita growth rate of nonoil GDP was used as a dependent variable. All explanatory variables are expressed in terms of nonoil GDP.
3/ Ratio of nongovernment investment to GDP.
4/ SEE denotes the standard error of the estimation.
5/ F denotes the marginal significance level of the test-statistic from an F-test with the null hypothesis that the coefficients on the fiscal policy variables are equal to zero.

C. Interpretation of the Results

The results of the quantitative analysis for the MENA countries can be interpreted as follows:

- In non-oil-exporting countries, total and current expenditures had the expected negative level effect on economic growth. Interestingly, the correlation of growth with capital expenditures was negative in these countries while the contribution of private investment to growth was positive, which could suggest that government investment was too large relative to the optimal share implied by the production structure.[41] The statistical significance of the composition of government expenditure, however, is weak, which is not surprising in view of the small number of countries and the small number of observations per country in the data set, as well as the problems with respect to the distinction between capital and current expenditures. In some cases, capital expenditures include outlays that are current in nature and are unlikely to support growth, such as current transfers and net lending to state owned enterprises. At the same time, health and education expenditures, which are inputs into the accumulation of human capital, are included in current expenditures. Inefficiencies could provide another explanation for the negative correlation of expenditure levels with growth.

- In non-oil-exporting countries, total revenue and tax revenue had the expected negative level effect on the growth performance in some cases only. However, the statistical significance of these links was weak, possibly due to a non-linearity. For a small share of tax revenues in total GDP, the relationship could be positive, perhaps due to their contribution to macroeconomic stability, while for large shares it could become negative as the distortionary element starts to dominate.[42] The mixed evidence on the impact of tax revenues on growth was perhaps also a reflection of the large share of indirect taxes in tax revenues.

- The magnitude of fiscal adjustment, as measured by the coefficient of the fiscal balance, does have the expected positive effect on the growth performance in non-oil-exporting countries. The significance of the overall fiscal balance implies that the levels of expenditure and revenue affect growth primarily through their effects on fiscal imbalances.

- The results for oil-exporting countries are in strong contrast with the results for the non-oil exporters. The dominant role of oil export receipts both in the evolution of government finance and, through expenditures and transfers, in economic activity provides one plausible explanation. If expenditure, revenue, and growth are strongly and positively correlated with oil market developments, other factors such as initial GDP or private

---

[41]See Cashin (1995) on optimal fiscal policies in endogenous growth models with public finance variables.

[42]See Sarel (1996) and the references therein for a similar argument with respect to the relationship between inflation and growth.

investment could play less of a role in explaining growth performance. Accordingly, the positive growth effects of both overall expenditures and revenues reflect the direct effect and the indirect effect of government spending, with the latter operating through private disposable income and thus private consumption given the large proportion of the labor force that is employed by the government. Another factor underlying the empirical results related to private investment could be the coverage of private sector, which in some cases includes public enterprises. The insignificant growth effects of the budget deficit is not surprising since the current budget balance in oil-exporting countries was likely to have contained little information about future instability in view of its large oil price related fluctuations and given the large external assets of some of these countries.

VIII. CONCLUSIONS AND POLICY IMPLICATIONS

The review of economic developments in the MENA region during 1980-95 shows that there has been important progress in recent years in achieving a stable macroeconomic environment. Nevertheless, with a rapidly growing population, the region's per capita income stagnated; domestic savings remained low and constituted a constraint to higher investment; and the economies of the MENA region remained highly exposed to changes in the external environment.

During the same period, governments in the MENA region played a dominant role in their economies, especially in terms of the resources they commanded, their contribution to output and their impact on economic incentives. On average, the ratio of government expenditure to GDP was high by international standards. In oil-exporting countries, substantial government activities reflect the importance of oil export receipts in these economies. In non-oil-exporting countries, the important role of the government has been largely a legacy of inward oriented development strategies that were adopted in the 1960s and the 1970s and significant public ownership of resources and capital.

Government revenues as a share of GDP in the MENA countries were also high by international standards. In oil-exporting countries, government revenues for the most part relied on oil export receipts; tax revenues were small with the virtual absence of any form of income taxation. Such a revenue structure has rendered government finances vulnerable to exogenous shocks. In non-oil-exporting countries, the revenue structure has been characterized by the important role of trade taxes and nontax receipts in total revenue.

Reflecting the relative size of government expenditures and revenues, MENA countries recorded, on average, large fiscal imbalances during 1980–95. Large fiscal imbalances were an important element underlying the low savings rate, were translated into sizeable financing needs of the government and were correlated with various indicators of macroeconomic instability, with adverse implications for growth.

Almost all of the MENA countries have undertaken some fiscal adjustment, and budget deficits declined sharply in recent years. In the non-oil countries, adjustment started in mid-1980s, while in oil-exporting countries determined efforts were visible in the 1990s. There were similarities in the pattern of fiscal adjustment across the MENA countries: expenditure reductions were the main instrument in achieving adjustment; revenue increases were limited; and capital expenditures bore the brunt of adjustment, especially during the initial adjustment.

The empirical evidence on the effects of the level and composition of government expenditure and revenue on growth in the MENA countries is mixed. In non-oil-exporting countries, the evidence on the negative impact of both overall expenditure and revenue on growth seems quite robust, suggesting that the substantial government share in economic activity had the expected toll on growth. No robust empirical evidence on the systemic effect of the composition of expenditure and revenue on growth was found, however, suggesting that: (i) the variation in the fiscal structures among countries has been too large in the limited sample used in the analysis; and (ii) unproductive elements in both current and capital expenditure existed. In oil-exporting countries, some empirical evidence on the positive impact of both overall expenditures and revenue on non-oil growth has emerged, indicating that the redistribution of oil revenue through the government has had the expected positive effect on growth. The results also suggest that in both groups of countries, government investment does not appear to have provided the impetus to growth as implied by many theoretical models. The empirical results indicate that budget deficits had the negative impact on growth in non-oil-exporting MENA countries as proposed in the theoretical and empirical literature. In the case of oil-exporting countries, the impact of budget deficits was found to be positive, albeit statistically insignificant.

Looking forward, economic challenges for the MENA countries are unlikely to ease: the international price outlook for commodities of importance to the region, in particular for petroleum, is moderate; the prospects for labor migration from the MENA region to Europe and within the region from non-oil to oil-exporting countries are not very promising; aid budgets in most industrial countries are being scaled down; the MENA countries have to compete for private capital flows in a more cautious investor climate; and the emphasis on integration efforts within the region and with the EU has been renewed. Moreover, the potential for transfers from oil exporting MENA countries to the rest of the region has diminished sharply. In such an environment, to minimize downside risks, benefit from the globalization and integration, and achieve high sustainable rates of growth, the MENA countries will need to address their policy challenges rapidly.

The fiscal policy and reform packages need to be designed carefully on a case-by-case basis to reflect the specific circumstances, conditions, and priorities in each country. The fiscal structures of the MENA countries, recent research on the determinants of growth, and the experience of many countries suggest the following general guidelines for reform:

- The stance of fiscal policy should continue to improve to enhance macroeconomic stability, increase savings, and promote capital accumulation by the private sector. In many of the MENA countries, despite the adjustment efforts in recent years, sizable budget deficits and their financing needs continue to create uncertainties about future macroeconomic policies in the face of large accumulation of public sector debts. In the case of some oil-exporting countries, it is actually necessary to start having budget surpluses soon to prepare better for the period after the exhaustion of their petroleum resources.

- In the MENA region, government expenditure to GDP ratios are high with adverse revenue and overall fiscal balance implications. It is, therefore, essential to reduce public expenditure programs while protecting those that support the accumulation of privately supplied factors of production and the vulnerable population groups. The quality of public expenditures could be enhanced through:

(i) increasing outlays on human resource development that would enhance productivity and better targeting of outlays on basic services;

(ii) limiting investment to infrastructure capital stock that enters the production function of the private sector and/or to correct for an externality or market failures;

(iii) reducing unproductive expenditures, including defense spending, and rationalizing and better targeting of subsidies that contribute to political stability; and

(iv) reforming the civil service aimed at both reducing the wage bill and improving the efficiency of government operations.

- Mobilization of revenues should be done in ways that minimize distortions, promote open international trade and do not render public finances vulnerable to exogenous shocks. Furthermore, increasing integration into the world economy requires a supportive tax and incentive structure. Thus, reform efforts need to focus on:

(i) lowering the dependency on oil revenues in oil exporting countries by changing the structure of revenues;

(ii) reducing the dependency on international trade taxes in non-oil countries by introducing broad-based domestic consumption taxes (such as a modern VAT) at moderate rates;

(iii) improving the elasticity of tax system through reduced reliance on nontax revenues, such as fees and charges, and elimination of exemptions; and

(iv) strengthening tax administration with efficient enforcements and collection procedures.

These reforms at times could imply trade-off between immediate deficit reduction and deficit reduction in the future. It is important to view budget constraints in a multi-period framework and implement high quality sustainable and growth oriented fiscal strategy.

Policy makers in the MENA region recognize the challenges, and the economic policy agenda of virtually all countries in the region includes reform of public finances. With forceful reforms providing a basis for a stable macroeconomic environment, accompanied by timely availability of external financial assistance to certain countries, MENA can look forward to reinvigorated and sustained growth, and would have a better opportunity to benefit from the changes in international economy.

References

Baltagi, Badi H., 1995, *Econometric Analysis of Panel Data*, (Chichester: John Wiley and Sons).

Barro, Robert J., 1991, "Economic Growth in a Cross Section of Countries,"*Quarterly Journal of Economics*, Vol. 106 (May), pp. 407-443.

_____, 1990, "Government Spending in a Simple Model of Endogenous Growth," *Journal of Political Economy*, Vol. 98 (October), pp. 103-125.

_____, and Xavier Sala-i-Martin, 1992, "Public Finance in Models of Economic Growth," *Review of Economic Studies*, Vol. 59 (October), pp. 223-251.

Bisat, Amer, Mohamed El-Erian and Thomas Helbling, 1997, "Restoring the Boom—Growth, Investment and Savings in the Arab Economies", IMF Working Paper, WP/97/85.

Cashin, Paul , 1995, "Government Spending, Taxes, and Economic Growth," *IMF Staff Papers*, Vol. 42 (June), pp. 237-269.

Chu, Ke-Young, 1990, "Commodity Exports and Public Finances in Developing Countries," in *Fiscal Policy In Open Developing Countries*, ed. by Vito Tanzi (Washington: International Monetary Fund).

Cuddington, John, 1988, "Fiscal Policy in Commodity Exporting Countries," Unpublished.

de Callatay, Etienne, and Ahsan Mansur, 1996, "Public Debt Dynamics and Fiscal Policy," in Maciejewski, Edouard and Ahsan Mansur, Eds., *Jordan: Strategy for Adjustment and Growth*, Occasional Paper 136 (May) (Washington: International Monetary Fund).

Devarajan, Shantayanan, Vinaya Swaroop, and Heng-fu Zou, 1996, "The Composition of Public Expenditure and Economic Growth,' *Journal of Monetary Economics*, Vol.37(April), pp. 313-344.

Easterly, William, and Sergio Rebelo, 1993, "Fiscal Policy and Economic Growth: An Empirical Investigation," NBER Working Paper No. 4499 (October).

Eken, Sena, Paul Cashin, S. Nuri Erbas, Jose Martelino, and Adnan Mazarei, 1995, *Economic Dislocation and Recovery in Lebanon*, Occasional Paper 120 (February) (International Monetary Fund).

El-Kuwaiz, Abdullah, 1990, "Oil Exports and Public Finance in Arab-Countries," in *Fiscal Policy In Open Developing Countries*, ed. by Vito Tanzi (Washington: International Monetary Fund).

El-Erian, Mohamed A., Sena Eken, Susan Fennell, and Jean-Pierre Chauffour, 1996, Growth and Stability in the Middle East and North Africa, (Washington, D.C.: International Monetary Fund).

Engen, Eric, and Jonathan Skinner, 1992, "Fiscal Policy and Economic Growth," NBER Working Paper No. 4223 (December).

Fischer, Stanley, 1993, "The Role of Macroeconomic Factors in Growth," *Journal of Monetary Economics*, Vol. 32 (December), pp. 485-512.

Gelb, Alan, 1988, *Oil Revenues: Blessing or Curse?* (New York: Oxford Univeristy Press).

Hsiao, C., 1986, *Annalysis of Panel Data* (Cambridge: Cambridge Univeristy Press).

International Monetary Fund, 1996, *Building on Progress: Reform and Growth in the Middle East and North Africa*, (Washington, D.C.)

Keane, Michael P., and David E. Runkle, 1991, "On the Estimation of Panel-Data Models With Serial Correlation When Instruments are not Strictly Exogenous," *Journal of Business and Economics Statistics*, Vol. 10 (January), pp. 433-441.

Knight, Malcolm, Norman Loayza, and Delano Villanueva, 1996, "The Peace Dividend: Military Spending and Economic Growth," IMF *Staff Papers*, Vol. 43 (March), pp. 1-37.

Koester, Reinhard B., and Roger C. Kormendi, 1989, "Taxation, Aggregate Activity, and Economic Growth: Cross-Country Evidence on Some Supply-Side Hypothesis," *Economic Inquiry*, Vol. 27 (July), pp. 367-86.

Landau, Daniel, 1983, "Government Expenditures and Economic Growth: A Cross-Country Study," *Southern Economic Journal*, Vol. 49 (January), pp. 783-92.

Levine, Ross, and David Renelt, 1992, "A Sensitivity Analysis of Cross-Country Growth Regressions," *American Economic Review*, Vol. 82 (September), pp. 942-963.

Mackenzie, George A., David W.H. Orsmond, and Philip R. Gerson, 1997, "The Composition of Fiscal Adjustment and Growth," Occasional Paper 149 (March) (Washington: International Monetary Fund).

Mankiw, N. Gregory, David Romer, and David N. Weil, 1992, "A Contribution to the Empirics of Economic Growth," *Quarterly Journal of Economics*, Vol. 107 (May), pp. 407-437.

Milesi-Ferreti, Gian Maria, and Nouriel Roubini, 1994, "Taxation and Endogenous Growth in Open Economies," IMF Working Paper WP/94/77.

Morgan, David, 1979, "Fiscal Policy in Oil Exporting Countries, 1972-78," *Staff Papers*, International Monetary Fund (Washington), Vol. 26.

Neary, J. P. and S. van Wijnbergen, 1995, *Natural Resources and the Macroeconomy* (Cambridge:MIT Press).

Nsouli, Saleh M., Sena Eken, Paul Duran, Gerwin Bell, and Zühtü Yücelik, 1993, The Path to Convertibility and Growth: The Tunisian Experience, Occasional Paper 109 (December) (Washington: International Monetary Fund).

Nsouli, Saleh M., Sena Eken, Klaus Enders, Van Can Thai, Jörg Decressin, and Filippo Cartiglia, 1995, *Resilience and Growth Through Sustained Adjustment: The Moroccan Experience*, Occasional Paper 117 (January) (Washington: International Monetary Fund).

Sarel, Michael, 1996, "Nonlinear Effects of Inflation on Growth," *IMF Staff Papers*, Vol. 43 (March), pp. 199-215.

Sassanpour, Cyrus, 1996, *Policy Challenges in the Gulf Cooperation Council Countries*, (Washington, D.C.: International Monetary Fund).

Shaban, Radwan A., Ragui Assaad, and Sulayman Al-Qudsi, 1994, "Employment Experience in the Middle East," Economic Research Forum Working Paper No. 9401 (Cairo: Economic Research Forum).

Shafik, Nemat, 1994, "Big Spending, Small Returns: The Paradox of Human Resource Development in the Middle East," The World Bank.

Solow, Robert M., 1956, "A Contribution to the Theory of Economic Growth," *Quarterly Journal of Economics*, Vol. 50 (February), pp. 65-94.

Swan, T.W., 1956, "Economic Growth and Capital Accumulation," *Economic Record*, Vol. 32 (November), pp. 334-61.

Tanzi, Vito, and Howell H. Zee, 1996, "Fiscal Policy and Long-Run Growth," IMF Working Paper WP/96/119.

World Bank, 1995, *Will Arab Workers Prosper or Be Left Out in the Twenty-First Century?* (Washington D.C.).

Xu, Bin, 1994, "Tax Policy Implications in Endogenous Growth Models," IMF Working Paper WP/94/38.