

The Middle East and
North Africa in a

*Changing
Oil Market*

Bright E. Okogu



INTERNATIONAL MONETARY FUND

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Production: IMF Multimedia Services Division

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A shorter article on this topic appeared in the March 2003 issue of
the IMF's *Finance & Development*.

ISBN 1-58906-234-5

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he world oil market has undergone tremendous changes in the past three decades, starting from the renegotiation of the “posted price”—a reference price on which royalties to host countries were calculated—in 1970. Before that, this price was fixed (at US\$1.80 a barrel during the 1960s) by the major international oil companies that operated the oil concessions in these countries. Subsequent events culminating in the 1973 oil price shock and the eventual transfer of property rights to the host countries heralded the start of a new era in the oil industry.

Middle Eastern countries—through their role in the Organization of the Petroleum Exporting Countries (OPEC)—were at the center of the transformation of the market since they owned the bulk of world proven crude oil reserves. In addition to transforming their societies through the inflow of substantial amounts of oil revenue, the Middle Eastern and North African (MENA) countries encountered new challenges in the area of economic policy and management, including how to cope with the adverse impact of the variability of oil prices on growth. The primary focus of this pamphlet is the developments in the international oil market, the role of Middle Eastern countries therein, and the policy challenges arising from this dependency on oil.

Evolution of the Oil Market

The series of oil price increases in 1973–74 marked a distinct era for the oil market because it coincided with the transfer of property rights to the host countries from the major oil companies that had operated the industry in an integrated framework up to that time. Until 1973, the price of crude oil was determined by the major oil companies in an oligopolistic market arrangement, under which a “posted price” was established, with royalties and taxes paid to host governments on the basis of this price. In June 1968, OPEC had published a *Declaratory Statement of Petroleum Policy in Member Countries (Resolution XVI.90)* in which members resolved to work toward greater control over their resources and increased share of their petroleum assets. Although this event was largely dismissed at the time as another ineffectual move by OPEC to wrest control from the international oil companies, analysts were later to acknowledge the importance of the Declaration. Griffin and Teece (1982, p. 7) wrote that “. . . though this doctrine was not taken seriously at the time, the events of the early 1970s prove it was an accurate blueprint for events to come.”

Era of Price Fixing: Balanced to Tight Market Period

Following the events of 1973–74, the determination of the crude oil price passed largely into the hands of OPEC, which carried out this function by setting an official selling price for the best known among its crudes, the Arab light, and leaving individual members to adjust their selling price in relation to this marker according to the quality of the oil—the American Petroleum Institute (API) rating, sulfur content, etc. The marker crude oil price-setting announcement was usually accompanied by production quota allocations to the members of the organization, with the principal objective of matching supply to demand after due allowance was made for non-OPEC production. The system worked relatively well until the early 1980s, eventually falling victim to its own success.

The high oil price level in the second half of the 1970s, following the events of 1973–74, encouraged exploration and production in high-cost oil regions, such as the North Sea, Canada, Mexico, and elsewhere. Of these, developments in the North Sea were probably the most dramatic. Total output from (Western) Europe was less than 0.5 million barrels a day (Mb/d) during the decade up to 1974. Growth accelerated from 1975 onward, as North Sea fields became profitable in the light of the (OPEC-induced) higher oil prices, compounded by favorable upstream tax incentives for oil companies. By 1985, production levels had reached 3.8 Mb/d, almost doubling again to 6.7 Mb/d by 2002, largely because of new technologies that enabled new high-cost fields to be profitably developed and that lowered production costs generally. OPEC's market share was gradually eroded as rising non-OPEC output more than absorbed the incremental demand and forced the organization to undertake successive cycles of quota cuts in a futile attempt to defend the price. Indeed, OPEC was successful for quite some time in setting the price while also controlling the output of its members largely because demand for OPEC oil was sufficiently buoyant relative to supply; a monopoly (or quasi-monopoly) cannot control both the output and price of its product.

The MENA countries were at the forefront of these developments. Aside from the use of Arab light as the benchmark crude, Saudi Arabia and other major MENA producers played the role of swing supplier, adjusting output up and down as necessary to balance the market; for example, they raised output during the Iranian revolution and lowered output when the market was oversupplied. OPEC eventually abandoned the swing supplier role in 1985 in an attempt to regain some of its market share.

An analysis of the circumstances that enabled OPEC to successfully control the oil price in the 1970s and early 1980s reveals the changes the oil market has undergone and why oil-dependent countries, including those of the Middle East region could no longer take any level of income from the oil sector for

granted. This inability to rely on oil revenue also underlines the necessity of accelerating the pace of economic reforms and economic diversification. The main features of the oil market during that period can be summarized as follows.

- Global oil demand grew by almost 10 percent between 1976 and 1979, following a dip in 1974 and 1975, as the world economy returned to a growth path; this comfortable growth rate made it possible for OPEC to accommodate its members' behavior, including their overproduction. OPEC's quota policy, though only partially successful, forced the oil market into a state of near equilibrium. The Iranian revolution in 1979 resulted in the loss of output from that country, which, combined with speculative behavior on the part of market agents, led to a doubling of oil prices in 1979–80. This price effect, along with weakening world economic growth, resulted in a fall in global oil demand by 4.5 percent in 1980 and a further 3 percent in 1981.
- More important, supplies from non-OPEC sources in the 1970s were much smaller than their present levels. The high average cost of production from principal non-OPEC sources, mainly the North Sea (about \$15 a barrel or more), acted as a constraint on growth from these sources. Consequently, their share of the incremental demand was small enough *not* to undermine the market or threaten OPEC's dominant position. With the decline in production costs, owing to the deployment of new exploration and production technologies, such as three-dimensional and subsea completion methods, the situation changed and the OPEC grip on the market weakened considerably.
- Technical innovations in the industrial, commercial, transportation, and household sectors were still at an early stage and, although there was evidence of declining energy intensity, the full impact was to become clear only in the 1980s, following years of incremental efficiency gains. This meant

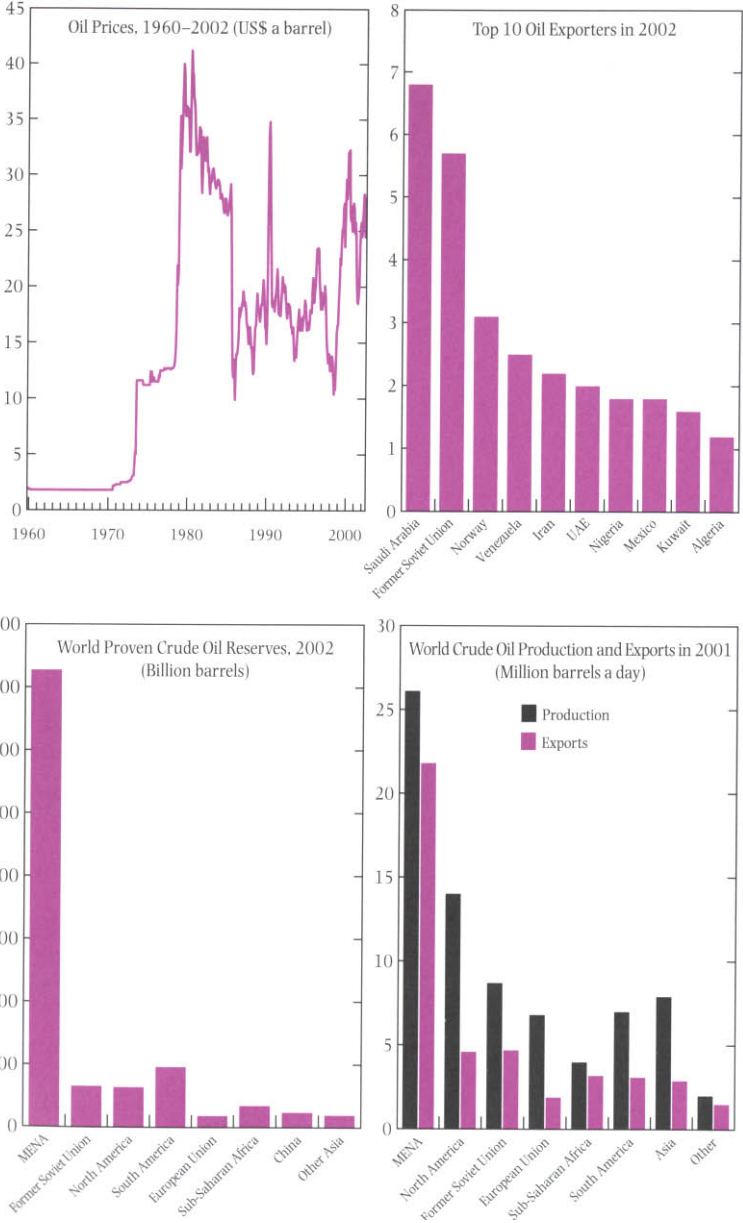
a decline in the amount of energy required to produce a given amount of GDP, thereby constraining the overall growth in energy demand.

- The system of international oil trade at the time was based largely on term contracts, with prices and volumes being negotiated on a quarterly basis. This provided the market with an identifiable benchmark over a known period; the spot market played mostly a balancing role, as well as serving as an indicator of the degree of stress, if any, in the market. The acceptability of the OPEC-driven pricing system was enhanced because it provided a predictable benchmark, which was appreciated by agents on both sides of the market in terms of their economic planning and investment decisions.
- The acceptability of the OPEC pricing approach appeared to have had theoretical backing as well. The prevailing wisdom in the oil industry during the 1970s, supported by contemporary research (e.g., Pindyck, 1978) was that the price of oil would display intertemporal increases because of its exhaustible character—following a Hotelling path (Hotelling, 1931). Although there was no unanimity on pricing in the oil literature at the time (e.g., Adelman, 1974, 1982), this may inadvertently have had the effect of justifying the OPEC price-setting practice and lulled major oil exporters into a false sense of confidence about the future of oil prices, thereby delaying needed economic reforms. However, since the 1980s, the price of oil has declined not only in real terms, but also in nominal terms (see Figure 1).

In summary, the circumstances prevailing in the oil market in the 1970s were favorable to OPEC, which used the opportunity to set prices at levels that the existing conditions would permit. Market conditions have changed significantly since then; OPEC has lost some market power, owing to price-induced non-OPEC output increases, and oil revenues have since become more difficult to predict.



Figure 1. MENA Countries: Oil Indicators



Sources: National authorities; BP-Amoco (2002), *Statistical Review of World Energy*; International Energy Agency (2002); IMF, WEO database.

Drive for Market Shares: From Control to Free Market Price Determination

With the persistent loss of market share in the first half of the 1980s, the leading MENA oil producers spearheaded a change of strategy within OPEC, which opted for defending a market share and allowing the price to be determined by market forces. In the event, the ensuing price war resulted in the predictable price collapse by July 1986 to under \$10 a barrel, from about \$28 a barrel in December 1985. As demand growth resumed, coupled with supply restraint by major producers, the price recovered somewhat before rising sharply as a result of the Middle East crisis of 1990–91. However, the struggle for market shares between OPEC and non-OPEC producers on the one hand, and among OPEC members on the other, ensured continued market weakness through most of the 1990s, culminating in the price collapse of 1998 when the oil price again fell to about US\$10 a barrel. The loss of market influence by OPEC (and MENA) producers was compounded by the increasing prominence of the oil spot and futures markets, which now formed the basis of oil pricing, rather than OPEC setting it—as formula pricing that linked contracts to spot and futures prices became the order of the day. (See, among others, Verleger, 1993, for a discussion of the rise and role of futures trading in oil.)

With widening fiscal and external current account deficits, the key MENA oil producers, through OPEC, pushed for a reintroduction of the quota system (and a target price) following the 1986 price collapse. However, this had limited success during most of the 1990s, primarily because of difficulties in forecasting world demand, non-OPEC output, and maintaining quota discipline among its members. With the loss of market control by OPEC, the excess supply of 1998 caused the price to collapse to levels dictated by market fundamentals. The authorities in the region responded by introducing expenditure cuts, mostly on capital outlays, but this also led to serious consideration being given to reforms. The world oil market has recovered since mid-1999,

driven by a combination of low global inventories, increased cooperation between OPEC and non-OPEC producers on output restraint, improved quota discipline among OPEC members, oil sector strikes in key producing countries, and geopolitical developments in the Middle East. This has enabled oil exporters, including those of the MENA region, to earn substantial revenues and build up foreign reserves. It remains to be seen how well they use this window of opportunity to achieve their reform objectives.

Demand-Side Factors

The price increases of the 1970s and early 1980s had serious effects on the behavior of demand—after a lag. In response to the high oil price increases of that time, oil demand growth slowed considerably, rising by an average of just 0.65 percent a year between 1975 and 1985, but recovered to 1.5 percent growth rate a year in the 1990s—mostly reflecting the high world economic growth at the time.

These changes were also manifested in improvements in energy efficiency—driven first by the higher crude oil prices and later by high end-user taxes on petroleum products. Economies have become more flexible in adapting to changing oil prices. In surveys of elasticities based on data from the 1960s up to more recent years, Sterner (1991), Goodwin (1992), and Graham and Glaister (2002), among others, found that elasticity estimates for petroleum products were higher in those studies that used data covering more recent years. Aside from differences stemming from different model specifications, coverage, and methodologies, a major explanation for this observation appears to be that market agents have had sufficient time to adapt to the oil price increases through fuel switching and deployment of more efficient capital stock. Another reflection of this is the fact that energy intensity—defined as energy consumption per unit of output—has declined by about 1.1 percent a year since the 1970s owing to a secular shift from heavy to lighter industries and to efficiency gains. Similarly, there have been huge fuel efficiency gains in the automobile industry, following such develop-

ments as the change in body design for improved aerodynamics and the introduction of fuel injection technology.

These developments were directly reflected in a decline in OPEC (and Middle Eastern) market share and influence, because oil supplies from these countries have been treated as residual to the market since the mid-1970s. This means that major consumers turned to these countries to meet the balance of their requirements only after procuring oil from non-OPEC sources. OPEC supplied about 49 percent of world oil requirements in 1975 but this share fell to just 30 percent by 1985. OPEC's supply share has gradually recovered over the years and now stands at about 37 percent (if Natural Gas Liquids—NGLs—are included). In general, in spite of losing some ground, Middle Eastern producers continue to occupy center stage in oil market developments, occupying 5 of the top 10 spots among oil exporters in 2002 (see Figure 1), and this situation will likely continue into the foreseeable future given their large proven reserves and spare capacity (see Okogu, 2003).

The Middle East in the Global Oil Balance

The MENA region, through its dominance of world oil reserve ownership, occupies a central position in the global energy balance—quite apart from its substantial gas reserves, although the latter is not yet well developed. Even with the loss of ground to other energy carriers, oil (and the region) will continue to play a core role in the future of world energy.

Oil in the Global Energy Balance

The prestige of Middle Eastern countries in world energy markets stems primarily from their role in the oil market, even though the region also owns substantial reserves of natural gas. Their fortune is thus directly related to how well oil holds its share vis-à-vis other forms of energy in the evolving global energy balance. Over the years, starting with the sharp price increases of the 1970s, it has lost some ground to other fuels.

The continued strength of oil in global energy stems from its dominance of the transportation sector, where it now accounts for about 96 percent of the market. It also accounts for 27 percent in the industrial sector and 9 percent in power generation—having lost ground to coal, gas, and nuclear power in these sectors (see International Energy Agency, 2001, 2002, for more details). The rate of substitution away from oil is directly related to how technically feasible such changes are and to the availability of cost-effective substitutes, which explains why oil has continued to dominate the transportation sector, where efforts to introduce alternatives have so far had limited success.

In contrast to oil, the share of natural gas in total primary energy has been on the increase; it rose from 18 percent to about 23 percent between 1973 and 2001, spurred by a combination of higher oil prices, the need for energy self-sufficiency in the major consuming countries, and diversification, as well as recent environmental concerns relating to global warming and climate change. Natural gas is the least carbon-intensive of the fossil fuels, followed by oil and then coal (see, among others, Mitchell, 2000, for a brief discussion of the environmental dimension of fuel use in the context of ongoing negotiations on climate change). The use of natural gas has also increased as a result of secular growth in the petrochemical industry, where it is the main feedstock for a wide variety of petrochemical products.

There are indications that the gas industry in the Middle East is underinvested because its share of the world output (at about 14 percent) is much lower than its share of reserves (40 percent). An illustration of this can be seen from the fact that although Iran owns the world's second-largest reserves (15.3 percent of total) after Russia, it produces only about 2 percent, and indeed, imports some gas from neighboring Turkmenistan (4.9 billion cubic meters in 2002). Projections of demand for natural gas up to 2020 by the International Energy Agency (IEA, 2002) suggest continued gains for gas in the global energy balance, while oil is expected to just maintain its present share.

Middle East Oil and Gas Resource Endowments

The Middle Eastern region is abundantly endowed with oil and gas resources. Of the 1,050 billion barrels of proven crude oil reserves at end-2001, the MENA region accounted for about 69 percent. In contrast, the region accounted for just about 31 percent of total world production, and about 50 percent of exports, which clearly demonstrates the centrality of the region to the present and future of the global oil market (see Figure 1). Although new oil reserves continue to be discovered and developed in various countries, such as in the countries of the former Soviet Union and in offshore West Africa, most forecasts indicate that dependence on Middle Eastern oil will increase in the coming years, as production starts to decline in the key North Sea basin and elsewhere.

Unlike oil, natural gas reserves are more widely dispersed around the world, with the Middle East accounting for about 40 percent of total world reserves of 155 trillion cubic meters. In 2002, gas production from the region accounted for about 14 percent of total world output, in part reflecting the relative underinvestment in the gas sector of the region mentioned earlier. This is, however, changing: the US\$25 billion Saudi Gas Initiative, ongoing or planned production expansion by Algeria, Qatar, and Oman, and expected developments in Iran, Libya, and Yemen should substantially raise Middle Eastern gas output in the coming years. The infrastructure needed to support the gas industry (pipeline gas and liquefied natural gas (LNG)) is quite costly, and partly explains the difficulty in developing a global gas market and the relatively low development of the MENA gas sector. Nevertheless, the region is becoming an important player in the gas trade, accounting for about 8 percent of pipeline gas exports and 40 percent of LNG exports in 2002 (see Okogu, 2002, for more details).

As part of the region's efforts toward industrialization, and to increase the value added to the oil sector, many Middle Eastern oil producers have built their own refineries, alone or in partnership with international oil companies. As of 2001, the refinery

capacity in the region amounted to about 10 percent of the world's total capacity of about 82 Mb/d and about 30 percent of world exports of refined products.

Projections of Demand for Middle East Oil and Gas

Present projections of global oil demand suggest that world requirements would rise to 92 Mb/d by 2010 and to 110 Mb/d by 2020 (see International Energy Agency, 2002, for example) from the 2002 level of 77 Mb/d. This may, however, be too optimistic. On the assumption that demand grows by an average of 1 percent a year up to 2020, this author projects world demand at 83 Mb/d by 2010 and 91 Mb/d by 2020. Of this, the call on OPEC crude oil (not counting NGLs, which is presently 3.6 Mb/d) would be about 27 Mb/d and 36 Mb/d in 2010 and 2020, respectively, based on the assumption that the OPEC market share for crude oil would rise to about 35 percent by 2010 and to 40 percent by 2020 from the current level of 33 percent. This growing market share for OPEC is premised on the fact that non-OPEC reserves are declining, though expected to still be quite resilient up to 2010, given the reality that they have largely produced at full capacity from their limited reserves over the past several decades. Within OPEC, MENA members own about 88 percent of the reserves and currently produce about 77 percent of the group's output. Given that some of the non-MENA OPEC countries are producing at close to full capacity, it is evident that the Middle Eastern members would increase their share of the group's output, but this pamphlet assumes that their share of OPEC's output remains unchanged. This would mean an increase in MENA output to about 31 Mb/d (or 34 percent of world oil supply) by 2020. Even if the oil price were to remain at US\$18–21 a barrel in real terms—which many analysts consider the long-term price—this should ensure substantial financial inflows into the region in the coming years.

There are, however, downside risks, including those relating to possible new oil discoveries in other regions and the possibility

of obsolescence in the event of cost-effective technological breakthroughs that bring cheap alternatives onto the market, for example, in the transportation sector. Regarding possible discoveries, the decline of non-OPEC production has continuously been predicted and subsequently revised since the 1980s as new discoveries and technological advancement have extended the life of non-OPEC fields. As for cost-effective technological breakthroughs, research is ongoing in a variety of areas, with a view to improving both the performance and cost-effectiveness of fuel cell technology, natural gas-powered vehicles, electric vehicles, etc. Such research was given a boost by the requirement introduced by the state of California in the 1990s that at least 10 percent of automakers' new models be zero-emission vehicles (ZEVs) by early this decade. Such cars, which rely on electricity and other zero-emission energy carriers, presently have the disadvantage of limited range and speed as well as high costs. However, improvements, which have also improved the market acceptability of these vehicles, continue to be made. While it is difficult to predict the degree of market penetration of ZEVs by 2020, developments in this area will clearly be critical for the future of oil since the transportation sector is the only area where petroleum products still have no serious competition.

It is therefore imperative that oil-exporting MENA countries expedite necessary reforms that are already planned or under way. Indeed, even if the oil market were to turn out as favorable to the region by 2020 as currently projected, reforms would still be necessary in the transition because medium-term projections indicate a declining trend in the oil price. This could be compounded by an expected increase in Iraqi oil exports, as the oil sector infrastructure is rehabilitated and new investments are made in Iraq's upstream oil sector (exploration, development, and production of oil). Besides, although the oil sector is a good source of financial inflows, its role as a provider of jobs is relatively limited, being capital intensive and an enclave sector. For a general assessment of unemployment issues in the MENA region, see Gardner (2003).

Challenges Facing Middle Eastern Oil and Gas Producers

A number of challenges face the MENA countries, some relating to the oil industry itself, and others concerning the economic management of the oil wealth. Aside from the need for a large capital infusion into the industry, MENA countries have the additional challenge of using the sector as a vehicle for increasing intraregional trade. The most important challenge, however, lies in designing appropriate macroeconomic policies to ensure that the oil wealth is managed effectively.

Investment Challenges

The capital intensity of the oil and gas sector means the sector requires regular injections of investment capital in exploration, development, production, and maintenance to replace produced oil and protect the integrity of the wells. These investments are being met in the MENA countries mostly from the internal resources of the national oil companies but also by tapping the international capital market (as in the case of Qatar LNG projects), and through foreign direct investment (as in the case of Sudan). Most of the countries prohibit foreign equity participation in the upstream oil sector but some allow production-sharing arrangements (e.g., Qatar).

There are also innovative investment arrangements, such as the Saudi Gas Initiative. The projects have experienced delays owing to difficulties in reaching agreement between the government and international oil companies. However, the authorities are determined to proceed with the Initiative, and have reportedly repackaged the projects and invited fresh bids from international investors. Under the original plan, the investing companies were to explore for and produce gas for use in downstream projects (water desalination, electricity generation, and petrochemicals), with the investment coming from these companies. It is estimated that the projects will cost US\$25 billion over 10 years, and produce 300 million gallons of water a day, 2 million

tons of petrochemicals a year, and 4,000 MW capacity of electricity. Other investment opportunities will come from ancillary projects, mostly in the form of supporting infrastructure. The investment challenge in the MENA region will involve policy changes, probably as an integral part of a wider structural reform program designed to attract foreign direct investment.

Challenge of Increasing Regional Energy Trade Through Integration

Energy integration across the region is another challenge, which authorities in some of the countries are working on. For example, plans are under way for energy integration in the GCC area designed to take advantage of the synergy afforded by the differential in resource endowments and energy needs in the various countries. In this regard, a pipeline system will be constructed to transport gas from Qatar—which has the world's third-largest natural gas reserves—to Kuwait, the United Arab Emirates, and Oman, with the option of taking it further afield to Pakistan and beyond. This would dramatically increase intraregional trade by creating an immediate market for Qatari gas in neighboring countries that are seeking to procure more gas for their power and petrochemical industries. Although some of these other countries also possess their own gas reserves, these are largely in the form of associated gas (i.e., produced as a side-product of oil), which means that the production of gas is constrained by OPEC oil quota obligations. If this project is successful it could form the nucleus of a wider cooperative energy arrangement extending beyond the GCC countries.

Challenge of Wealth and Economic Management

Perhaps the most important challenge facing MENA oil-producing countries is how best to manage their oil wealth taking into account its exhaustible character and with due attention to intergenerational equity, given their dependency on a depleting natural resource. This essentially requires fiscal policy that ensures the

preservation of the oil wealth's value. This could be achieved by the government limiting consumption to the permanent income from the total wealth. However, the size of the oil wealth—and hence the size of the permanent income—cannot be estimated with certainty because some of the critical variables, such as size of reserves, future oil prices, and cost of production, are not, by their very nature, known. Estimating the size of the hydrocarbon wealth and designing appropriate policies to optimize that wealth for the benefit of present and future generations roughly encapsulates the nature of the challenge currently facing MENA oil-dependent economies. Decision-making under uncertainty, assuming risk-averse behavior, requires the government to be conservative in its fiscal policy orientation. This could mean using a conservative oil price path for the calculation of permanent wealth, as well as focusing on the non-oil fiscal balance to assess fiscal sustainability.

Given the exhaustible nature of oil, the aim should be to accumulate a sufficient stock of financial assets that the flow of income from those assets can finance the non-oil fiscal deficit after the exhaustion of the oil reserves or, indeed, during periods of prolonged decline in the oil price. A more stringent fiscal rule for oil-dependent economies has also been proposed. The so-called “bird-in-hand” approach proposes that the projected income should be the return on financial assets *already* in hand rather than estimated income from future wealth (see Barnett and Ossowski, 2002, 2003, for more detailed discussions of these issues). The main advantage of this model is that it removes some of the elements of uncertainty from the planning process. It protects the economy from the risk of possible obsolescence of the type discussed earlier in connection with the possibility of alternative fuels displacing oil, and therefore has the effect of forcing the government to be even more fiscally responsible. Obsolescence in this case means not necessarily that oil usage would be obsolete, but that if technological advancement makes alternative fuels competitive in the energy market, the price of these alternatives may become so low that it would no longer be cost-effective

to produce and use oil for the same purpose. The challenge of wealth management would be even more daunting if these countries aim to maintain their per capita wealth, given the rapid population growth rates in the region.

In MENA countries, non-hydrocarbon fiscal balances vary quite a bit (see Table 1), just as the size of the oil reserves and foreign assets vary. Some countries, such as Kuwait, have built up dedicated financial assets for intergenerational equity purposes, while others have oil stabilization funds (for example, Libya, Oman, and Qatar). However, in all cases, the emphasis in the region is increasingly on reforms to strengthen the structure of the budget both from the revenue side and from improved expenditure management; structural reforms designed to broaden the operational space of the private sector and attract foreign direct investment; and labor market reforms to upgrade the skills of the workforce.

In terms of economic diversification, the abundance of oil and gas reserves in the region could be seen as a mixed blessing. The sector has been a source of large fiscal revenue and foreign exchange earnings that have facilitated the implementation of huge infrastructure projects and enabled these societies to build foreign assets and attain a high standard of living. Indeed, it has afforded some of them the wherewithal to extend generous financial aid to other developing countries. In this regard, individual development funds have been set up by some MENA countries, such as Saudi Arabia and Kuwait, which also set up multilateral financial institutions in collaboration with other countries, such as the Islamic Development Bank and the OPEC Fund for International Development.

However, the large oil resources have also meant excessive dependence on a single sector, with the attendant downside risks from oil price fluctuations. Over the years, most oil-exporting MENA countries' economic policy has focused on efforts to diversify their economies away from the hydrocarbon sector. The results have been patchy: diversification into the petrochemical industry has been quite successful for some countries (Saudi Arabia and

Table 1. MENA Countries: Selected Economic Indicators, 1995–2002

	1995	1996	1997	1998	1999	2000	2001	2002
Real Non-Oil GDP (percent)								
Bahrain	4.2	3.7	3.0	3.7	2.9	4.1	5.7	4.9
Kuwait	3.4	3.1	4.1	3.1	1.0	1.1	0.5	1.1
Oman	5.0	2.8	6.1	2.6	-0.6	5.5	8.8	2.4
Qatar	-1.6	5.5	14.6	2.2	0.4	2.0	3.5	4.5
Saudi Arabia	0.5	1.0	4.5	2.6	2.8	3.9	2.5	2.9
United Arab Emirates	9.1	8.3	9.2	5.0	7.5	9.7	4.6	4.8
Algeria	4.0	3.8	-0.5	5.5	2.3	1.3	3.3	4.0
Egypt	...	...	...	...	...	...	...	...
Iran	3.5	6.2	7.1	3.8	2.5	4.9	6.7	7.4
Libya	-0.3	4.4	8.0	-5.3	2.6	5.1	2.5	2.4
Yemen	9.4	4.6	9.1	7.2	1.8	3.9	3.9	4.5
Non-Oil Fiscal Balance (percent of GDP)								
Bahrain	-17.5	-16.9	-17.6	-17.6	-17.4	-16.8	-18.1	-20.6
Kuwait	-39.2	-26.8	-22.2	-28.6	-23.9	-16.4	-20.2	-25.6
Oman	-33.9	-29.1	-28.5	-28.9	-28.0	-27.8	-31.0	-29.5
Qatar	-29.3	-37.0	-30.6	-31.9	-27.7	-18.0	-23.0	-14.2
Saudi Arabia	-27.8	-26.4	-28.4	-23.6	-23.3	-27.1	-30.7	-29.5
United Arab Emirates	-22.5	-26.1	-18.5	-20.1	-19.4	-15.4	-24.2	-26.3
Algeria	-23.1	-22.9	-26.3	-24.3	-25.8	-33.1	-31.5	-33.1
Egypt	...	...	...	...	...	...	...	...
Iran	-24.5	-21.1	-18.1	-15.1	-12.9	-16.8	-17.2	-23.7
Libya	-25.2	-29.2	-35.3	-30.9	-16.6	-30.9	-51.0	-105.2
Yemen	-17.0	-37.4	-31.8	-24.3	-23.3	-22.8	-24.2	-26.4
Oil Revenue (percent of total revenue)								
Bahrain	56.8	62.1	59.9	46.8	56.1	73.0	68.6	69.9
Kuwait	68.9	66.6	63.8	58.7	64.0	69.6	68.2	66.4
Oman	73.5	77.3	77.4	65.3	73.7	82.9	80.3	76.7
Qatar	61.9	68.8	64.5	60.0	71.1	78.4	70.9	72.0
Saudi Arabia	72.2	76.1	77.8	56.6	70.8	83.1	80.6	78.0
United Arab Emirates	55.8	56.9	58.4	41.5	43.7	55.7	58.8	63.3
Algeria	59.7	63.0	63.9	55.0	61.9	76.9	68.7	64.6
Egypt	...	...	...	...	...	...	...	...
Iran	65.2	61.5	53.6	35.8	42.8	67.5	57.4	58.6
Libya	62.2	69.6	66.5	57.6	50.6	65.2	64.8	82.0
Yemen	47.9	69.9	67.4	52.1	57.1	62.3	64.3	75.6
Oil and Gas Exports (percent of total exports)								
Bahrain	59.7	67.3	62.3	54.0	66.5	73.6	70.9	69.8
Kuwait	93.9	94.6	94.3	88.1	89.8	93.2	92.6	92.4
Oman	78.4	80.2	75.9	67.4	76.4	82.9	80.2	77.2
Qatar	65.0	67.3	68.4	74.9	84.8	86.7	85.5	84.2
Saudi Arabia	81.1	85.2	81.8	74.6	79.8	85.9	81.7	81.7
United Arab Emirates	46.1	49.2	44.6	37.5	45.2	54.6	48.4	45.7
Algeria	87.9	89.3	87.0	86.8	89.8	91.8	88.9	89.2
Egypt	48.3	48.2	33.7	22.5	35.6	37.2	28.7	31.0
Iran	78.4	75.0	67.7	47.3	63.4	84.3	70.7	73.9
Libya	...	...	...	...	...	...	...	...
Yemen	89.6	87.3	85.5	81.9	86.5	90.0	87.7	88.3

Source: Country data files.

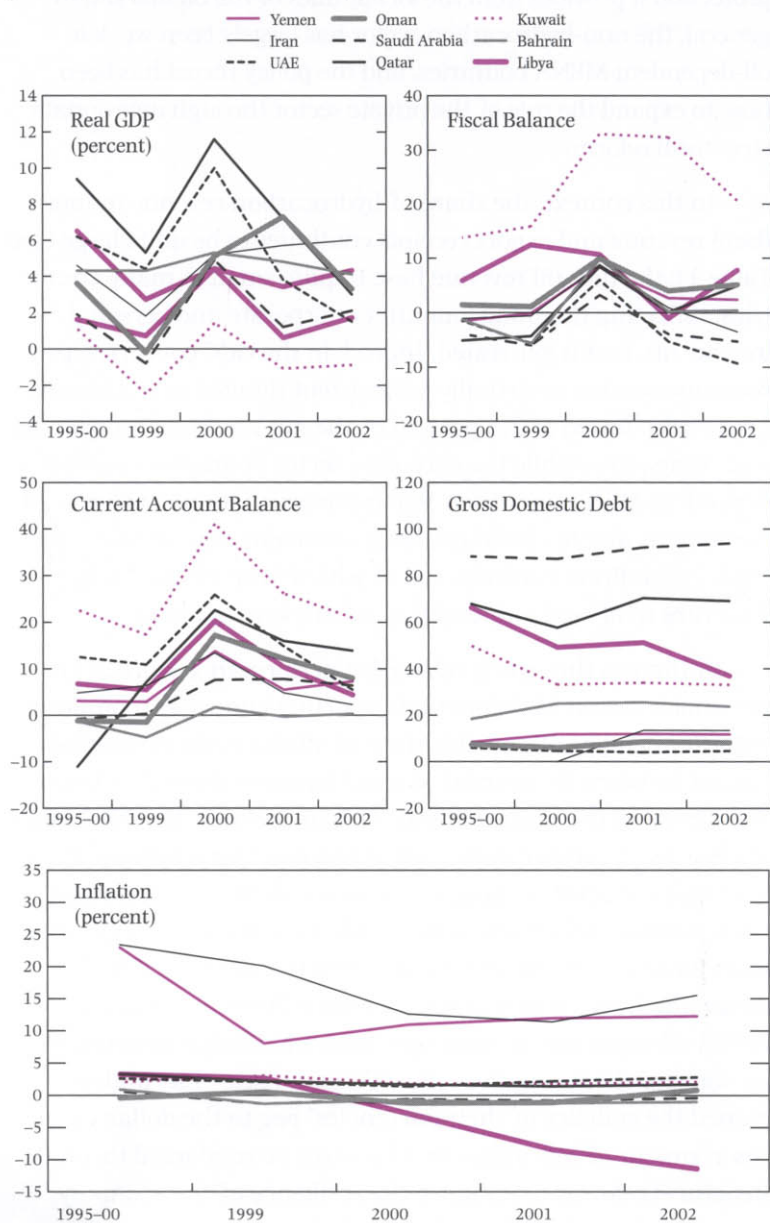
Kuwait, for example) but the price of petrochemical products tends to be positively correlated with that of oil, which reduces the protection it provides from the vicissitudes of the oil market. In general, the non-hydrocarbon sector has largely been weak in oil-dependent MENA countries, and the policy thrust has been how to expand the role of the private sector through appropriate structural reforms.

In this context, the share of hydrocarbon revenue in total fiscal revenue and export receipts continues to be quite large (see Table 1); the non-oil revenue base is quite small in many countries, reflecting the small amount of corporate and personal income tax that is generated. Indeed, in the GCC countries, personal income tax is virtually nonexistent (limited to the Islamic tax or *zakat* levied at 2.5 percent of the net wealth of individuals and companies) while the corporate sector is small in most oil-dependent MENA countries. Furthermore, there are widespread exemptions and tax holidays, large recurrent expenditures, and weak expenditure controls—all of which have left the budget structure weak and vulnerable to oil market variability.

Although the strong oil market performance since 2000 has enabled most MENA net oil-exporting countries to improve their financial positions, this state of affairs in the oil market cannot be taken for granted as most forecasts indicate a lower price trend in the medium term. This underlines the importance of reforms. A further indication of the need for reforms is the level and behavior of the gross domestic debt and net foreign asset position, which are unfavorable for some of the countries (see Figure 2). On the specific performance of the external sector, the huge oil export receipts since 2000 have enabled MENA oil-exporters to build up sizable net foreign reserves and, for some of them—such as the GCC countries—has underpinned the stability of their currencies' peg to the dollar in an environment of low inflation. This must be reinforced through structural reforms to enhance the resilience of the economy against unfavorable oil market developments.

Figure 2. MENA Countries: Selected Economic Indicators, 1995–2002

(Percent of GDP, unless otherwise indicated)



Source: National authorities.

Concluding Remarks

The world oil market has undergone a series of changes that have reduced the share of oil in the global energy balance and, with it, the influence of Middle Eastern oil exporters. The era when oil producers had some control of the oil market and could predict their oil receipts with some degree of certainty has gone. The price of oil follows a random walk process, which makes planning more difficult. In spite of oil's loss of ground, however, these countries remain at the center of world oil developments, with the likelihood that the world's reliance on the region will increase in the long run as global demand grows and non-OPEC output declines.

The MENA oil-producing countries face a number of immediate challenges related to oil's dominant role in their economies and the risk arising from the variability of prices. They have to accelerate their economic reforms to reduce dependency on oil, including by promoting investment and private sector growth, thereby creating jobs for their populations. They must pursue prudent fiscal policies and save their oil revenue windfalls at every opportunity to help cushion the impact of oil price declines when they occur. Fiscal reforms designed to increase the resilience of the budget to oil revenue shocks—such as a broadened revenue base, reduction in unproductive expenditures, and civil service reforms—will also play an important role. For some of the countries, such as those of the GCC, labor market reforms also need to be accelerated.

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