The Third Oil Shock
The Effects of Lower Oil Prices

Edited by
Joan Pearce
First published in 1983, this book collects a number of essays about the effects of a sustained period of low oil prices. The opening chapter describes how oil prices have impinged on other elements of the economy and assesses the costs and benefits, in the short and long term, of low prices. The following three chapters deal with different groups of countries and indicate clearly that for none of them do lower oil prices have unequivocally positive or negative effects — a situation examined in the chapter on the international financial system. The last three chapters analyse the shifts lower prices are likely to produce in relations among the groups closely involved in the oil market.
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The Royal Institute of International Affairs

Routledge & Kegan Paul
London, Boston and Henley
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Preface

Towards the end of 1982 the price of oil was the subject of much attention. The discussion concentrated on whether the price of oil would fall, by how much and for how long. Little consideration was given to what would be the effects on the world political economy if the price of oil were to decline significantly and not to rise again for a sustained period. The probability of this materializing seemed high enough, and the consequences if it did important enough, to make it worth examining in some detail. Hence, earlier this year I asked a number of experts to write not about what would happen to oil prices but about what would happen if lower oil prices were to prevail for some time. The result is this book. Although by the time these chapters were written the London Agreement of March 1983 had brought closer the prospect of enduring lower prices, the authors treat that prospect as a hypothesis rather than as an established fact.

Oil is a large enough element in the international economy for a major change in the trend of oil prices to have widespread repercussions. Lower oil prices alone will not change the course of the world economy, nor indeed of most national economies. They will rather curb or hasten existing impetus; at the margin this can be highly significant. In the context of economic activity in the industrial countries, lower oil prices will not in themselves cause a recovery, but if there is already an incipient recovery lower oil prices will make it more vigorous and longer-lasting.

The opening chapter describes how oil prices have impinged on other elements of the economy and assesses the costs and benefits, in the short and longer runs, that could flow from lower oil prices. The following three chapters deal with different groups of countries and indicate clearly that for none of them do lower oil prices represent either an unalloyed boon or an outright calamity. A case in which lower oil prices could tip the balance is considered in the chapter on the international financial system. The last three
chapters analyse the shifts that lower prices are likely to produce in relations among those groups most closely involved in the oil market: the extent of OPEC's influence; the consumer countries' need for energy security; and the altered role of the oil industry.

I am very grateful to the authors for having written to a tight, in some cases a very tight, deadline, and for responding with alacrity to my queries and suggestions. From the outset I have received guidance from Robert Belgrave, head of the British Institutes' Joint Energy Programme. He and most of the authors, together with Roy Batchelor, Alastair Clark, Richard Portes and Patricia Romines met early in May to discuss the chapters in draft. All of them, as well as Esperanza Duran, gave valuable advice. The production of this book owes much to the skilful diligence of Pauline Wickham. We appreciate the cooperation and flexibility of the staff of the Policy Studies Institute who set up the text on their word processor. As with many Chatham House enterprises, this one could not have been accomplished as quickly and as smoothly were it not for the outstanding competence and commitment of the secretaries; particular thanks are due to Louise Orrock and Jean Pell.

JP
May 1983
OPEC agreed collectively to reduce official selling prices for the first time in its history in March 1983. The organization also imposed an overall production ceiling on its members and adopted a prorationing agreement, making the Saudis the explicit swing producer and market balancer. The price cut came in the midst of a political and intellectual debate concerning the fundamental evolution of the international energy sector. A host of questions has now arisen striking at some of the most basic and previously unchallenged assumptions about the 'rules' of the international 'oil game', the structure of the energy market-place and the evolving petroleum investment climate.

The essays in this volume take as a working assumption that there will be lower, but stable, oil prices for an extended period of a decade or more. They attempt to trace some of the likely implications of this assumption. The basis of the assumption is that the steep price increases of the 1970s have set in motion dynamic processes and structural changes in the global energy economy which will effectively preclude prices higher than at present for a decade or so. Demand has fallen partly as a result of the global recession, but probably more significantly because of long-term structural changes associated with conservation in most user sectors, inter-fuel substitution, new investment and inventory patterns, and the proliferation of participants in the oil markets.

Whether this working assumption is borne out depends on a variety of factors, about which we know little today. There are no good data on which to base projections of demand or supply. Lower prices should cause demand to increase and the development of new supplies to lag, but the magnitude of both responses is unclear. Similarly, whether there is price stability or greater volatility depends on whether OPEC remains cohesive and able to influence the market.

Despite these unknowns, it seems useful to assume that
price stability at the new levels will persist, in order to trace the benefits and costs. Even this is by no means easy. Modestly declining prices are generally agreed to offer, overall, a positive and well-timed fillip to the world economy, but other implications of lower prices are unclear. The downward price adjustments of 1983 have positive and notable impacts both on efforts to bring world inflation under control and on recovery from the staggering international recession which earlier price increases, themselves, helped to bring about. In the United States alone, a four-dollar reduction in price adds the equivalent of more than $20 billion to disposable income - about the same order of impact as the first two years of the Reagan Administration's reductions in personal income tax! It reduces directly the USA's import bill by more than $10 billion and the import bills of the rest of the world by at least $25 billion\(^1\).

In the short run, these general and diffuse positive benefits to most governments and consumers should be set against the more concentrated costs to all oil-exporting countries. Over the longer term, however, the situation could be reversed if under-investment in new conventional energy supplies combines with dramatic increases in demand to put in place the structural conditions for another round of price rises.

This balance of costs and benefits between exporters and importers is reflected in the international financial system, with some debtor countries' problems intensifying as those of others are alleviated. Similarly, in the trading system: the oil price reduction, by helping to foster growth in some countries, opens new trade opportunities; but, by reducing the income of oil exporters, it constricts their markets for imports from industrial and developing countries alike, depriving exporters of markets (for capital goods, armaments, consumer goods and agricultural products) which were previously growing robustly at the very time when international trade was generally stagnating. The overall balance is hard to assess.

Also imponderable is the degree to which the recent price reductions both reflect and feed a process of rapid and fundamental structural change in the international petroleum economy. Much depends on how great a role OPEC continues to play. This will be determined by whether the organization holds together despite a situation which exacerbates its internal tensions; whether it can collaborate with non-OPEC oil-exporting countries; and whether its share of world oil production capacity continues to decline. Another important
factor is the tendency of the petroleum sector to behave more like 'normal' commodity markets. It is unclear how far this tendency will continue, and whether consumer or producer governments will want or will be able to prevent the market elements from dominating the administered elements in the oil sector. A last major uncertainty is whether future investment conditions will encourage enough energy investment to obviate a further period of supply shortage.

The cyclical nature of the oil market
Governments, energy-intensive sectors of the economy and, perhaps most of all, the oil industry were caught off guard when the oil supply overhang emerged. Most analysts had confidently argued that the world was in the midst of a two-to-three-decade period in which there would be a precarious balance between supply and demand for petroleum while alternative fuels were being developed(2). On the premise that oil demand would for some time outstrip new discoveries of conventional petroleum, prices were expected to increase annually by inflation plus about 2%. This view was reinforced by the particular vulnerability of oil supply to disruption due to civil strife or regional conflict in or among oil-producing countries, or by reason of Soviet intervention.

How could such a sizeable glut have emerged between 1979 and 1982? Apparent demand for oil in the non-communist world was over 51 million barrels per day (b/d) in 1979, and fell to less than 41 million b/d by the end of 1982, with demand for OPEC oil falling from 31 million b/d to less than 15 million b/d, reducing OPEC's market share from over 63% to about 33%. Is cyclicality something new in the oil markets?

Cyclicality in the oil markets - fluctuations in demand or supply with accompanying changes in prices - has always existed. But, because the short-run elasticity of both demand for and supply of oil are low (that is, demand and supply respond slowly to price changes) and because oil prices have often been controlled in some way, by companies or by governments, this cyclicality has not been evident. The sustained real price increases of the past decade obscured those qualities which make oil similar to other commodities, while emphasizing qualities which seemed to make petroleum unique.

Evidence of cyclical fluctuations can be found in what might be called the first international oil regime, which lasted roughly from 1928 to 1971, and in the second regime in the 1970s(3). In the first period, both the nominal and the
real price of oil steadily declined as inexpensive new fields were brought onstream, principally in the Middle East. The oil regime was dominated by the Seven Sisters, the large integrated oil majors, which were responsible for exploration, production, refining and marketing worldwide. These few vertically integrated actors in the market-place managed cyclical changes in demand by adjusting production in the exporting countries, whose resources they controlled. Cyclical changes, in short, were almost wholly absorbed by producing/exporting countries. Indeed, countering this undue burden of adjustment, along with a redistribution of the 'rents' from oil, were the primary incentives behind OPEC's formation.

The regime of the 1970s had a more complex set of mechanisms to deal with changes in demand, as OPEC successfully administered prices and increased its share of the rents from oil operations. OPEC broke the control of the vertically integrated companies over resources in the ground, and quickly changed the nature of the market, by shifting the burden of cyclical adjustment to the companies and the consuming country societies. It also attempted to move vigorously into downstream operations, competing directly with the majors in selling and distributing crude and drawing up ambitious plans in refining and petrochemicals. But OPEC's actions also laid the basis for its demise. New players entered the game, vastly increasing the number of actors in the market-place and developing non-OPEC sources of exports. And, an array of national oil companies, in both the developing and the industrial countries, assisted by government subsidies, further eroded the roles both of the majors and of OPEC governments in finding new crude sources, in purchasing crude outside established channels, and in creating new distribution and other downstream operations.

Inexorably, it seemed, the transformation in the petroleum economy during the 1960s and 1970s would lead to a public-sector-dominated arrangement with many players replacing a predominantly private sector market, dominated by a few participants. The bargaining relationship between private firms and governments shifted dramatically in favour of the latter, as the concession system was effectively terminated and replaced by production-sharing arrangements. Indeed, it appeared to many observers that the ineluctable trend was reducing the role of private firms to service or risk-contract arrangements, with exploitation and distribution becoming the exclusive domain of governments.
But such assumptions about the underlying structure of the international oil market have now been undermined. Only four years after the world had succumbed to two oil shocks within seven years, a period of over-capacity in production developed, unexpectedly, but for reasons inherent in the OPEC arrangements.

Cyclical changes are now being manifested in ways more typical of a normal commodity market, with prices more reflective of the basic balance between supply and demand. OPEC's unwillingness to relinquish the goals and roles that it established in the 1970s has placed its members back in the position they were in before 1973. Once again it is they who have borne an undue share of the cyclical adjustment.

The decline of OPEC and the reassertion of the supply-and-demand balance as the major determinant of oil prices signify the reappearance of a 'normal' market in the international petroleum economy. Its scope and durability will depend to some degree on how long the current oil glut will last and whether OPEC will, politically, be able to administer a floor price, a question to which we will return later. But other changes in the structure of the world petroleum economy have halted and will almost inevitably reverse the trends of the 1960s and 1970s. Private petroleum companies are now re-emerging as the main players in the petroleum game, albeit in ways significantly different from those of the 1950s.

The economic factors responsible for the recent price reductions - the phenomenal 20% decline in free world consumption over three years and the dramatically increased supply overhang - are well documented. These factors include: the worldwide economic recession; conservation stemming from a decade of steep price increases; the drawdown by companies of their historically high inventory levels, at what were probably unprecedented rates; the increase in non-OPEC supplies to 22 million b/d, and the preference of companies to buy from these more competitive and secure sources; and inter-fuel competition, with the substitution of oil by coal, natural gas and nuclear energy. While the weighting of these factors is open to dispute, my view is that the recession is the least important; conservation, new oil supplies outside of OPEC, and structural change in the industrial economies account for most of the change. Hence economic factors will prevent the price of oil from rising in real terms for the rest of the decade. Political factors will be required to prevent the price from falling.

Assessing the impact of the recession is difficult, as is
differentiating between the effects of recession and conservation. There used to be a close relationship between energy consumption and economic growth, with the two increasing on a 1:1 basis for most of this century. But 1973 marked a break in this historical linkage. The International Energy Agency(5), for example, estimates that for the eight years after 1973, when OECD growth averaged 2.3% per annum, the demand for energy barely increased (by 0.2% annually). Substantial savings were found in every sector of the economies of the industrial countries, led by housing and transportation, followed by the commercial and industrial sectors. At the same time quite rapid structural adjustment occurred, which entailed capital expenditure shifting from such energy-intensive sectors as steel and cement and towards light industry, services and energy conservation. How an upturn in economic activity would affect the relationship is uncertain. As for conservation, this should not be much less with oil priced at $29 than at $34 or $40, so long as the perception remains that oil prices will increase in the long run. (On the other hand, investments in unconventional alternative fuels will continue to be uneconomic.) There is, in fact, growing evidence that the conservation gains manifested in the late 1970s and early 1980s stemmed from the price increases of 1973-4 and that the gains from the 1979-80 price increases have not yet worked through the major economies.

Inventory patterns present similar unknowns. The first half of 1982 saw an unprecedented inventory drawdown worldwide due to lower prices, high interest rates and lower demand. Contrary to expectations, inventory reductions accelerated into the first quarter of 1983, when they reached perhaps over 5.5 million b/d (vs. historical seasonal levels of 1.5-2.5 million b/d). This drawdown increased excess supply and helped accelerate the downward price movement. The drawdown will eventually end, but it is hard to say that inventories will now be carried at any specific level, other than the number of days of forward consumption required by some governments. Ready access to additional supplies and uncertainty over the evolution of prices will probably mean that once inventories are stabilized, they will not undergo their historical seasonal variance.

Inventory management has in the recent past reinforced the trend of demand. During the tightening market conditions of 1979-81, inventories were built to historically high levels, helping to sustain the upward price movement. The opposite has been the case since 1981. If in future the oil market is going to behave increasingly like that of an
ordinary commodity, with more frequent price variations, inventory management may serve to dampen, rather than to amplify, price variability. Importing country governments, consumers, producer-companies and producer-governments all have a stake in this. OPEC ministers would like inventory or stock policy to head the agenda of a global dialogue.

Fuel substitution has clearly reduced demand. The share of oil in overall energy consumption, after increasing dramatically from 40% in 1960 to 56% in 1973, has steadily declined, giving way, especially in the OECD countries, to coal (for which demand rose twice as fast after 1973 than before), nuclear energy and, to a lesser degree, natural gas.

On the supply side, the momentum of the 1970s seems likely to continue into the 1980s, with non-OPEC exploration and development outpacing progress in OPEC countries. Since 1973 OPEC reserves have grown by less than 0.5% annually (as against 6% before), compared with 4% for non-OPEC reserves (2.6% before). Many believe this trend will continue. Conoco, for example, forecasts non-OPEC supplies increasing to 28 million b/d by 1990, despite the expected decline in Soviet exports. With oil demand worldwide increasing at no more than 1% a year for the next twenty years, demand on OPEC is not expected to exceed 22 million b/d throughout the 1980s and 26-27 million b/d in the 1990s.

Whether oil will lose all of its unique aspects remains open. Few sectors of the economy have been more politicized than energy. In neither the industrial nor the developing countries, in neither OPEC nor non-OPEC members is there yet a clear consensus on the degree to which energy, and petroleum in particular, should be integrated into the public sector. Providing energy security - access to reliable, uninterruptible sources of energy at reasonable prices to consumers - is widely accepted as a public responsibility in the consuming countries. But the mixture of private and public initiative with respect to exploration, development and production, distribution and pricing of fuels has been a hotly debated political subject and is likely to remain so. Much depends on whether - and, if so, when and under what conditions - a new supply disruption takes place. Much depends as well on how the longer-term investment cycle, which accompanies the shorter-term demand and supply cycle, is played out.

The petroleum investment cycle
Investment patterns in the petroleum industry reflect the interplay of a multiplicity of factors: geology, projected
prices and costs, availability of capital, terms and conditions for entry established by 'host' governments, and expected stability of economic and political conditions and of governmental policies. As with all structural changes in a key sector, the bases of one investment regime are established in its predecessor. What has undermined the regime of the 1970s was the discovery of large reservoirs of oil outside of OPEC; many of these discoveries were in the industrial country market-places of Europe and North America, where governments have historically been uncomfortable with administered pricing and unwilling to establish production limitations in order to support price levels. These non-OPEC discoveries were the necessary conditions for what is transpiring in the 1980s. The sufficient conditions were the supply overhang and political decisions taken in the United States.

Clearly, the most important of these is the decision taken in the United States to decontrol the prices of crude oil and petroleum products. OPEC's rise to power related not only to overall oil market conditions, but also to the change in the United States' position in the world petroleum economy as it moved from net self-sufficiency to the distinctive position of the world's largest importer of crude oil. That transformation was accelerated and accentuated by the imposition of price controls in 1974.

Price controls were designed to buffer the US economy from oil-pricing decisions taken 'outside' the United States. The system worked perversely, encouraging oil imports, increasing the vulnerability of the United States and of other importing countries to a supply disruption at a time when reducing both should have been the primary goals of energy policy. It increased frictions with other importing countries, virtually all of which priced oil at market levels, or, through their fiscal systems, higher. It discouraged domestic exploration and resulted in misallocation of domestic resources because it sent the wrong price signals to consumers and investors.

The decision to decontrol oil prices reversed all of the perverse consequences of maintaining lower than world prices in the US market-place. It was followed by a dramatic reduction in oil imports, from over 8 million b/d to under 3 million b/d for a brief period, and had a permanent impact on the trajectory of US oil demand. The decontrol of US prices, more importantly, enabled the United States to become reintegrated into the world petroleum economy, shifting pricing power away from OPEC and towards the largest consumer market-place and unleashing an oil investment
boom in the United States that affected investment patterns worldwide.

The United States has always attracted a disproportionate share of petroleum investment, even during the period of price controls in the 1970s. After 1979, this share grew even larger - 85% or more of active rigs were onshore or offshore the United States in 1980-2. With price decontrol, the United States became the most attractive investment climate for three simple reasons.

First, the United States offers an unparalleled combination of political stability and economic liberalism. Second, its fiscal regime is far more attractive than most others. Third, despite the extraordinary amount of drilling which has occurred historically in the United States, the potential for large discoveries offshore the United States remains great.

The reduced profit horizon of companies associated with the recession and the decline in world oil prices, combined with the new attractive investment climate in the United States, is creating a competition for petroleum investment capital which could well transform the rules of the investment game internationally. What we can expect to see for the remainder of this decade is a reversal of what took place in the past decade, with an improvement - perhaps a dramatic improvement - in the investment terms provided by governments to private oil companies as those foreign governments realize how much they need to compete with the United States to attract petroleum investments.

The 1960s and 1970s were clearly a period of petroleum nationalism. Oil and mining companies were expropriated, and the concession system was replaced by production-sharing agreements and a movement to service or fixed-fee contracts. In most cases, a government was assumed to own its country's oil and mineral resources, which became regarded as precious depletable elements of national sovereignty. Competition among companies for access to crude oil allowed governments to impose increasingly stringent terms on those wishing to explore for and produce oil, as well as to feel able, in many cases, to change contractual terms unilaterally in order to increase their take.

The situation has been rapidly reversed. For the rest of this decade governments will be competing with each other for oil company capital and, in particular, competing against the standard set by the investment climate in the United States. This trend, which I believe will accelerate, began, perhaps, in 1980 when the military government of Peru relinquished power to a democratically elected regime eager
to reinvigorate the national petroleum sector. To attract companies, in the aftermath of widespread nationalization by the military, terms competitive with those in the United States were offered. By now, Peru has been joined by perhaps a dozen countries in relaxing the terms for investment. The North Sea countries are actively reviewing their fiscal systems, and the United Kingdom has already taken steps to alter its investment climate so as to foster continued petroleum exploration and development.

The most important question in assessing foreign investment risks and opportunities is whether this improvement will be permanent, or whether it will be changed unilaterally and retroactively by individual governments when the next oil shortage occurs. The answer will depend on other international developments, and on how wisely oil companies and governments devise stable contractual terms for exploration and development, which will withstand the cyclical forces of rising and falling oil demand.

There are other lessons about the sanctity of contractual obligations and commitments, which could carry over into the next pricing cycle. Those countries which unilaterally voided contracts when oil prices were escalating were the first to suffer when companies and even government purchasing agents voided or cancelled agreements as oil prices started to fall. Interest in the sanctity of contracts may well revive, prompting measures to make government promises more credible.

A more important change, perhaps, is the growth in multinational activities by the national oil companies of oil-producing countries, and especially their interest in investing in exploration and production in the United States and even in some OPEC countries. The Kuwait Petroleum Company is a case in point, with its upstream and downstream investments in the United States, Indonesia, China and Western Europe. One of the most significant effects of a period of stable and low prices could be to accelerate this trend. It would revive interest in formalizing reciprocity of investment terms and would deter governments from changing contracts unilaterally.

**OPEC's choices**

Some of the major consequences of lower prices are felt by OPEC, and OPEC's own responses to lower prices are critical to the future paths that prices might follow. Stable prices can be anticipated only if OPEC is able to maintain its cohesion, and, as Louis Turner argues later in this volume,
this is much doubted. If any of OPEC's major members decides to strike out on its own, aiming to increase its market share by offering lower prices, the organization might disintegrate, with prices falling steeply and a new era of price volatility ensuing.

Three main issues are debated in relation to OPEC. Primary is the question whether OPEC did in the past, or can in the future, determine prices. Second is OPEC's cohesion and the degree to which members' interests are mutual or divisive. Third is Saudi Arabia's role in the organization and whether it is dominant or dominated by the others.

OPEC's 'power' has probably been overstated in the past, just as it has been understated more recently. With production capacity of something over 31 million b/d, OPEC is apparently best able to administer prices and maintain internal cohesion when demand for OPEC production is in the 24-26 million b/d range. When demand is higher, there have historically been overwhelming incentives for individual members to break out from the OPEC pack by extracting higher prices via premia and spot market sales. When demand is lower, discounts and spot sales are offered to increase market shares. Opportunities for exacting premia or offering discounts have been far more frequent than periods of OPEC cohesion. In this sense, OPEC has been less a price administrator than a follower of market tendencies.

This view, however, depreciates the overall impact that OPEC has had on prices. Official prices are many times greater than production costs throughout the Middle East: only OPEC's willingness to impose a prorationing programme has prevented prices from falling dramatically. Similarly in past periods of tightness, only OPEC's general agreement on a marker price has restrained prices from rising well above the levels actually set. OPEC has not been a paper organization. Whether it can maintain its pricing and production role depends most on whether demand for OPEC oil picks up and attains the 24-26 million b/d level before too many of its members offer competitive discounts and the pressures on the organization's coherence become overwhelming. OPEC's major test in an era of lower prices is whether, having ceased to be a price administrator, it can act as a price preserver.

OPEC's cohesion is a function of a number of related factors: its overall market share, the commonality of interests of its members, and politics among the members of the organization. OPEC's cohesion depends largely on its reasserting its market presence following the phenomenal and unprecedented drop in its share of oil consumption in the non-
The communist world - from 63% to 33% - during the past few years.

In the short term, a rebound in demand can result only from an end to inventory drawdown and a spurt in economic activity in the industrial world. At best, however, demand for OPEC oil will probably not be as much as 21 million b/d until 1984-5. In this case, OPEC's members will undergo significant and perhaps unprecedented pressures to discount, as Louis Turner argues below. This does not mean that OPEC will necessarily fall apart. Its members may well be up to the task, depending largely on what sacrifices Saudi Arabia and some other producers are willing to endure for the sake of OPEC unity.

The longer-term outlook is equally problematic. It is generally recognized that while OPEC will be able to recoup some of its lost market share, it will be hard pressed to regain its former level. Moreover, declining production, combined with increased domestic demand in many OPEC members, will radically shift their relative positions. As Edwin A. Deagle, Jr, has recently pointed out(6), Algeria, Ecuador, Gabon and Qatar may well drop out of OPEC's ranks by 1990, with limited, if any, export capacity. Four others - Indonesia, Libya, Nigeria and Venezuela - will probably export substantially less than at their peak, with little or no capacity to modify their production as part of an OPEC production programme. OPEC's rump would, in these circumstances, compromise the five Persian Gulf countries, whose total production capacity would be no more than 24 million b/d. Power within OPEC would be concentrated in the Gulf countries.

Awareness of these eventualities has enabled OPEC's members to maintain their cohesion as a group despite formidable temptations for individual countries to break ranks. None of them has an interest in price volatility; none wishes market forces to predominate over intervention in the market-place. But their unity on these general objectives conceals profound differences in other respects. High reserve, low population countries (Saudi Arabia in particular, Kuwait and the UAE to a lesser degree), taking a long-term view, desire price stability and price moderation in order to stretch out the life of their reserves and to preserve both the role of oil in energy consumption and OPEC's share of world oil trade. The low reserve, high population countries, taking a short-term view, wish to maximize income so as to accelerate industrialization, in preparation for the imminent decline in their exports, and to service their debt. They
generally prefer price hawkishness, but in present circumstances they are the most likely to offer discounts in order to increase volumes to be exported and thereby enhance revenues.

Over time, if OPEC power becomes focused on a small group of Gulf countries, the stresses on the group are likely to increase, and its internal and external policy postures are likely to change. The smaller OPEC/Gulf group will undoubtedly desire to maintain price stability, although Iran and Iraq, once their war is settled, will probably be more price hawkish. Market stabilization is likely to require enormous swings in production if the group is to assume the role of market balancer by itself(7).

The OPEC countries may find this impossible without coordinating policies both with the major non-OPEC producers and with the major importers. Recognizing the difficulties, some, especially the Gulf producers, endeavoured to begin a 'dialogue' with the major non-OPEC producers, the United Kingdom, Norway and Mexico, in March 1983, and hinted at willingness to have a dialogue with the USSR. Eventually, such a dialogue would need to involve also Japan, the United States and Germany.

Clearly, the best hope is to enlarge OPEC's ranks by enlisting Mexico. Mexico's choices here are quite difficult. Besides being averse to relinquishing national sovereignty over oil decisions to OPEC or any other group, the government also prefers to be a free rider on OPEC with respect to pricing, and to sell all it can produce. Mexico will have to be convinced that to restrict production is in its national interest before it becomes one of the market balancers. It is inconceivable that Norway or Britain would follow suit, except perhaps to exchange information on future increases in production capacity and to reach tacit agreements on pricing.

To obtain help in sharing the burdens of balancing supply and demand, OPEC will have to discuss market stabilization with the major consuming/importing countries with a view to achieving a commodity stabilization arrangement. As many of the OPEC/Gulf country oil ministers now realize, a dialogue will have to focus on stock management and prices in the domestic market-places of the consumers. But there is, and will continue to be, an aversion in the United States and the other industrial countries to the massive intervention which would be required. A fruitful dialogue on stock management is exceedingly unlikely in the current political environment.
Central to OPEC's cohesion is Saudi Arabia. There has been tension between it and the other members since the early 1970s when Saudi Arabian production and export capacity was expanded beyond any reasonable view of Saudi needs and in excess of that of any other OPEC country. The Saudis, with the largest export capacity and largest reserves in the world, have wanted to preserve as long as possible the importance of oil in the energy economy, of OPEC in the oil market, and of Saudi Arabia in OPEC. All these require price moderation, so the Saudis seek to maintain a gradually increasing real oil price. They have also wanted to depoliticize the process of price determination by relying as much as possible on presumptive rules of automaticity - they abhor confrontation(8).

OPEC currently faces two fundamental short-term challenges, both involving its core members. First, there is the question of how the burden of OPEC's market balancing role is to be spread within OPEC. Second, there is the political instability engendered by the combination of the oil glut and the continuing pressures of the Iranian revolution and the Iran/Iraq war.

OPEC as a whole has borne the brunt of the adjustment in the glut by virtue of its collective residual supplier role. GNP in OPEC in 1983 will fall for the third year in a row. The OPEC current account surplus, in excess of $100 billion in 1980, has vanished and will not for the time being re-emerge. Tables 1.1 and 1.2 demonstrate the abrupt decline in OPEC country export earnings and the extraordinary debt-servicing problems of such members as Venezuela and Nigeria. They also demonstrate the exceptional sacrifices, in terms of vastly reduced expenditures and development programmes, that Saudi Arabia must endure as its contribution to balancing the market. There is a serious risk that one, or more, of OPEC's members will decide that it can no longer sustain the share of the burden allotted to it by the March 1983 agreement. When demand picks up OPEC may be threatened by a dispute about how the benefits should be distributed.

Stability will also be subject to pressures indigenous to the Middle East. Post-revolutionary Iran relentlessly pursues its war with Iraq and will apparently be willing to terminate hostilities only after the Iraqi leadership is removed. It has served notice that it will not desist in its efforts to challenge Saudi Arabia's leadership in both OPEC and the Gulf Region, with its desire for a higher market share. Both it and Iraq will want to increase oil exports after the war ends. At
Table 1.1  OPEC crude oil export earnings

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<td>1.3</td>
<td>38.25</td>
<td>17.2</td>
<td>1.1</td>
<td>34.50</td>
<td>13.8</td>
<td>1.2</td>
<td>29.50</td>
<td>12.9</td>
</tr>
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<td>13.4</td>
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<td>0.8</td>
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<td>14.3</td>
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<td>6.5</td>
<td>0.6</td>
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<td>106.9</td>
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</tr>
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<td>1.0</td>
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<td>10.7</td>
</tr>
<tr>
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<td>1.3</td>
<td>0.1</td>
<td>33.00</td>
<td>1.2</td>
<td>0.2</td>
<td>29.00</td>
<td>2.1</td>
</tr>
<tr>
<td>Gabon</td>
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<td>34.50</td>
<td>1.6</td>
<td>0.1</td>
<td>34.25</td>
<td>1.4</td>
<td>0.2</td>
<td>29.00</td>
<td>2.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>18.4</td>
<td>34.09</td>
<td>229</td>
<td>15.0</td>
<td>33.57</td>
<td>182.0</td>
<td>14.9</td>
<td>-</td>
<td>156.1</td>
</tr>
</tbody>
</table>

* Estimate based on 17.7 million b/d for the year.

OPEC current account balance (billion):

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>+ $108.1</td>
</tr>
<tr>
<td>1981</td>
<td>+ $ 53.3</td>
</tr>
<tr>
<td>1982</td>
<td>- $ 10.0</td>
</tr>
<tr>
<td>1983 (est.)</td>
<td>+ $ 6.2</td>
</tr>
</tbody>
</table>

(assuming average annual exports at the indicated levels - not likely given Q1 production levels in 1983)
Table 1.2  Main oil exporters: estimated financial position

<table>
<thead>
<tr>
<th>Production required</th>
<th>International reserves ($ billion)*</th>
<th>External debt December 1981 ($ billion)</th>
<th>Short-term commercial debt (due in 1982)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEC</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Algeria</td>
<td>0.9</td>
<td>3.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Ecuador</td>
<td>0.2</td>
<td>0.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Gabon</td>
<td>0.2</td>
<td>0.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Indonesia</td>
<td>1.6</td>
<td>5.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Iran</td>
<td>2.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Iraq</td>
<td>2.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Kuwait</td>
<td>0.9</td>
<td>4.1</td>
<td>5.6</td>
</tr>
<tr>
<td>Libya</td>
<td>1.2</td>
<td>9.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1.6</td>
<td>3.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Qatar</td>
<td>0.2</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>7.3</td>
<td>32.2</td>
<td>27.9</td>
</tr>
<tr>
<td>UAE</td>
<td>1.1</td>
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<td>3.1</td>
</tr>
<tr>
<td>Venezuela</td>
<td>2.2</td>
<td>8.2</td>
<td>6.0</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>3.0</td>
<td>4.1</td>
<td>0.5</td>
</tr>
<tr>
<td>Norway</td>
<td>0.5</td>
<td>6.2</td>
<td>6.6</td>
</tr>
</tbody>
</table>

* Excludes foreign assets.

whose expense will these exports be made, if demand remains relatively flat? The ever-present danger, of course, is a further radicalization of politics in the Middle East as a result of the festering Israeli dispute and the combination of the Iranian revolution and the Iran/Iraq war. The demonstration effects of the successful Islamic 'revolution' in Iran have undermined the political legitimacy of regimes throughout the area, including Egypt, Iraq and Saudi Arabia. Will the reverberations of lower oil prices, in the form of lower development expenditures in Saudi Arabia and the Gulf states, if combined with a radicalization of politics in the region, usher in a change in these regimes? Or will lower expenditures result in a reduction in foreign workers and a consolidation of regime legitimacy? Far-reaching change is likely, but its direction is indeterminate.

The short-term balance
The longer-term aspects of structural change in the international petroleum economy have been highlighted because they set the context within which oil price reductions took place. We shall now seek to assess the short-term costs and benefits of lower prices to the major participants in the energy sector.

The benefits of lower real prices. There is little doubt that for the world economy as a whole stable, but lower, prices afford short-term benefits. Lower prices may well provide the basis for a balanced recovery of the world economy in a context of price stability, which would make most societies better off. These benefits are not difficult to enumerate. And they are a mirror image of the costs of the price increases of the 1970s, which imposed economic dislocations on virtually all consuming countries, including impacts on prices, growth and employment.

The initial benefits of a decrease in oil prices can be thought of either in terms of a shift in market power from producers to consumers, or in terms of an excise tax rebate. All oil-importing economies will benefit from this rebate; the degree will depend in part on how the exchange rate between their currency and the dollar evolves (a stronger dollar results in lower benefits outside the United States and vice versa). If oil consumption is flat this year, or rises by no more than 1-2%, the net effect of the March OPEC agreement will be a shift of some $40 billion from oil-exporting to oil-importing countries, or about $110 million per day this year alone. Three-quarters of this benefit will be received by the OECD countries (about 0.4% of GNP) and one quarter by
the LDC importers. Among developing countries, as David Pearce points out in Chapter 3, a $10 billion import savings should be compared to a net non-OPEC LDC trade deficit of some $76 billion.

Consumption and investment should, therefore, be enhanced by the price reduction, depending on how much of the reduction is passed on to consumers by governments and refiners. Regardless of government actions, lower import costs should reduce inflation in the industrial countries by as much as 1% this year (depending on price adjustments in other fuels), providing an overall boost to real incomes and spending. A reduction in costs and an increase in consumer spending should, all other things being equal, also help to revive capital expenditure.

Expectations are that lower oil prices should reduce not only inflation but also inflationary expectations, thereby also facilitating a reduction in nominal interest rates, especially outside the United States. In the United States the electoral cycle should help, at least through 1984, to reverse the increase in real interest rates. Overall the reduction in oil prices should reinforce the decline in interest rates and promote other factors leading to at least a moderate economic recovery.

Government policies, both fiscal and monetary, will be important in determining the effects of lower oil prices. Governments in most industrial countries will be tempted to increase energy consumer taxes, principally to raise revenue, but also to compensate for the fall in oil prices and so maintain the momentum of energy conservation and the development of other fuels. If governments are short-sighted, however, they will not offset increases in energy consumer taxes by decreases in other taxes, including those whose reduction would foster energy development.

For industrial and developing countries, reduced oil import costs will improve the balance of payments, to the extent that they are not outweighed by other factors, including increases in oil imports (which probably will not be very great) and increases in other imports (which probably will be sizeable, but will - particularly if they are capital goods - help spur on world output and trade). Improved balance-of-payments positions will enhance developing countries' ability to service their debts and possibly persuade international banks to lend to them on more favourable terms.

The net imports of the dozen largest borrowers among oil-importing LDCs in 1982 were more than $30 billion. Lower oil prices should reduce these countries' import costs by
about 15%, or $5 billion, benefiting especially Brazil, Turkey, Thailand, the Philippines and Korea(9). The external debt of this group rose by some 10% to over $300 billion last year. Lower interest rates may reduce their debt-servicing charges by as much as $6 billion net this year.

It should be noted that oil demand in developing countries is relatively inelastic. Unlike the industrial countries, they use oil chiefly for essential purposes. They were thus unable to reduce their demand for oil during the price escalations of the past, but will probably not greatly increase it now that prices are lower.

Costs of declining real prices. The other side of the short-term balance sheet is no less pronounced, although the costs of declining prices are concentrated in the oil-exporting countries and the oil industry. There is an immediate cost for all LDC oil-exporting countries as a result of lower prices, although the non-OPEC exporters, and Mexico in particular, are better off than OPEC given their ability to market all available production. Even lower interest rates and enhanced non-oil exports cannot offset the abrupt and unexpected decline in export earnings from oil - which on average constitute over 80% of the OPEC countries' earnings (over 95% for some), and more than 50% for Mexico. The lost revenues will eventually result in a significant reduction of imports of both consumer and capital goods (dampening world trade), a curtailment of development programmes, an increase in indebtedness (perhaps imposing a greater burden on the international financial system), and a threat to domestic political authority.

Of course the burden of this adjustment will not be evenly spread, given the willingness of Saudi Arabia and the other Gulf countries to absorb, at least temporarily, a disproportionate share. The countries outside the Gulf will encounter difficulties which, though less severe than they might have been, will be more severe than those of the exporters with small populations and huge foreign asset holdings. The total external debt of the nine OPEC and non-OPEC oil-exporting developing countries outside the Gulf increased by about 40% between 1980 and 1982, to a level of more than $200 billion, of which more than 35% is due in 1983 (see Table 3). Even with lower interest rates, total net interest payments may remain at roughly the same level owing to increased debt, reduced earnings on foreign holdings, and the raising of the 'risk' element in their loan charges. Nor can most of these countries expect income from other sources to mitigate the deterioration in their current accounts. Only Mexico,
Table 1.3  Oil export earnings: implications of a $28 per barrel oil price for nine major borrowers

<table>
<thead>
<tr>
<th></th>
<th>Change in net oil exports in 1983</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ billions(a)</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-2.3</td>
</tr>
<tr>
<td>Venezuela</td>
<td>-2.2</td>
</tr>
<tr>
<td>Nigeria</td>
<td>-1.7</td>
</tr>
<tr>
<td>Mexico</td>
<td>-1.5</td>
</tr>
<tr>
<td>Algeria</td>
<td>-1.3</td>
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<tr>
<td>Ecuador</td>
<td>-0.3</td>
</tr>
<tr>
<td>Malaysia</td>
<td>-0.2</td>
</tr>
<tr>
<td>Peru</td>
<td>-0.2</td>
</tr>
<tr>
<td>Egypt</td>
<td>-0.1</td>
</tr>
</tbody>
</table>

(a) After adjustment for price differentials and export volume changes.
(b) Goods and services, excluding oil and interest, before adjustment to lower oil earnings.

Indonesia and Malaysia will be able to benefit from growth in non-oil export earnings as the world economy rebounds.

The significant negative repercussions on the oil exporters of the decline in oil prices will be transmitted to the world economy and political system. Their curtailed imports will affect economic recovery elsewhere, especially in the industrial countries, whose fastest-growing markets in recent years were the oil-exporting countries. Reduced development efforts - and contraction of the economy - will jeopardize the political stability of a number of exporters. Already, the major industrial countries have organized special efforts to deal with the indebtedness of one oil exporter, Mexico, whose stability and ability to overcome this abrupt change of circumstances is of central foreign policy significance to them.

The changed fortunes of the oil-exporting LDCs will impose costs on the entire financial system - on the commercial banks and public lending institutions. As Kenneth King argues in Chapter 5, whether these costs exceed the benefits stemming from the improved position of the oil-importing developing countries will depend on whether oil prices fall so sharply as to cause an oil-exporting country to default and so bring on a financial crisis which would obstruct world economic recovery. Following the first two oil shocks, funds were recycled from the oil-exporters with the Euromarkets acting as the chief intermediaries. Now the need is to recycle funds in the opposite direction and the official multilateral institutions will probably play a larger role.

Another recycling problem is the curbing of OPEC aid to other LDCs. In 1975, OPEC assistance accounted for about 3% of OPEC GNP and fully one-third of all official assistance. This level has been falling and was only 22% of total international assistance by 1981. Replacing this assistance, which has been concentrated within the Arab world, will be another challenge to the world community. The petroleum industry is often cited as another loser, at least by the bourses of the world. There is no doubt that corporate profits in the oil industry fell dramatically along with the reduction in oil prices. This fall in profitability occurred because the industry's own growth expectations were not fulfilled, perhaps because they were based on the aberrant price increases of 1979-1980. The costs have, however, prompted a rapid adaptation of the oil industry to changed circumstances. Oil companies have drastically reduced, or even eliminated, capital expenditure on synthetic and high-cost fuels. They have pared their non-essential operations
and concentrated on development projects with rapid returns. Some smaller, highly geared companies have folded, but the larger integrated companies may well emerge from current circumstances as more efficient enterprises. Indeed, if the analysis earlier in this essay of structural changes in the international petroleum economy is essentially correct, the balance of power in the oil markets will shift increasingly away from producing nations and to the oil companies.

The longer-term balance
While the short-term effects of low oil prices are clearly more beneficial than harmful to the world economy, the longer-term balance is not neatly definable. It depends substantially on the interaction of factors being set in motion today. The dynamics can move in any of several directions.

The future price path is a key variable. For the most part this volume assumes, though it does not predict, price stability. Should the price of oil drop suddenly, demand for petroleum and petroleum products could well exceed the highest levels now envisaged for 1990-5. Investments in new supplies could also fall well below currently anticipated levels owing to uncertainty about the return on capital expenditure. And the impact of dramatically lower prices on the world's financial and commercial structures could be chaotic.

Another aspect of the longer-run balance pertains to actions by governments. Few sectors have been as highly politicized as energy. All governments have in the past considered it legitimate actively to intervene in the energy market. Although the petroleum economy is now more competitive than it was, it is an open question whether governments will permit a fully free and competitive petroleum economy to develop. The principal oil exporters have good reason not to do so. That is why OPEC may well withstand the pressures it is now undergoing. Conversely, the consumer countries might permit domestic prices of petroleum and petroleum products to fall freely, but if they attach importance to conservation, fuel-switching and overall energy security, they will act to prevent it.

Many of the issues relating to the longer-term balance may be summarized by reviewing the energy security questions, and the energy demand and supply responses to lower prices.

A principal danger of lower prices is that a false sense of energy security will lead governments to take no steps to enhance their energy security, and instead actually to dis
mantle the instruments now available to deal with it. Indeed, there is a danger that the vulnerability of the economies of the world to a supply disruption may increase.

Efforts to improve energy security were uppermost on the agenda of the Western countries after 1973. The fundamental changes in the structure of the energy sector do not mean that these efforts should be terminated. Rather, as Hanns Maull argues in Chapter 7, it is essential to rethink energy security issues under new circumstances, involving a freer environment with cyclical changes in price.

Petroleum security has involved several strands of policy in the West. It has been based, first, on ensuring that supply lines from exporting countries are as secure from interruption as they reasonably can be; second, on reinforcing 'friendly' governments in the Middle East, through direct assistance, through a network of bilateral trade ties, and through the US Rapid Deployment Force (and potentially, through a future European RDF); third, on measures to deal with a future supply interruption - the establishment of the International Energy Agency's emergency sharing programme and the building of public stocks as a deterrent to an interruption and for use in case one occurred; and, fourth, on the longer-term effort to reduce the importance of energy in the industrial countries' economies (i.e. breaking the linkage between growth in GNP and energy demand), reducing oil's share in overall energy use, and bringing onstream new supplies of conventional and unconventional energy.

This overall Western strategy assumed that the world economy was in transition between an oil-based economy and one in which other fuels would be available in abundance. This central assumption is challenged by the current supply overhang and the recent reductions in prices. The signals that these convey in the market-place may persuade consumers or investors to behave in ways which in the longer run may prove detrimental. While there is little doubt that governments should, in general, build their energy policies on what the market will bear, what role should governments assume if market signals lead to over-consumption and under-investment in new supplies? Longer-term energy security may require governments to intervene to promote conservation and the development of new supplies, both conventional and unconventional.

The area of the energy economy about which analysts know least is the demand response to downward movements in price. Most analysts currently seem confident that a stable price of $29 per barrel will enhance economic activity
without reducing the incentives to conserve. But there is no guarantee that the demand response will not be more robust—just as it was stronger and far more rapid when prices were escalating than anyone had predicted. The more price levels fall, the more likely is such a response to develop. If it does, the longer-term balance of costs and benefits will shift, and the industrial countries might find their economies even more vulnerable to another disruption than they were to the last.

Governments will be inclined to undertake actions on the demand side, in response to lower prices, but probably for reasons related less to energy security than to budgets. Governments in consuming countries are likely to see the energy sector more as a source of revenue than as one related to the fundamental welfare of society as a whole. Consumer taxes and tariffs on imports will more likely be tempting devices for revenue enhancement than protection against wrong signals to consumers. Governments are less likely to try to define a floor price for energy security purposes, so as to continue the momentum of the 1970s to conservation and fuel-switching. They may judge the costs of any direct form of such intervention to be greater than the longer-term losses to energy security of a future, price-induced surge in demand.

On the supply side, there are a number of paths which the market could follow as a result of lower prices. Much has been made of the fact that the rate of increase in petroleum reserves outside of OPEC during the past decade has outpaced by far the growth in proved and probable OPEC reserves. But a decline in the future rate of growth is more likely than recent trends would indicate. If the rate of investment slows down, then some OPEC countries will be increasingly well poised to increase substantially their and OPEC's market share, given the much lower costs of developing petroleum resources in the Middle East than elsewhere in the world.

On the other hand, the competition for diminished investment capital among governments should, when combined with lower costs of some exploration and production activities, improve investment terms worldwide and result in an appropriate supply response for conventional fuels. Governments can spur on this supply response by providing fiscal incentives for petroleum investments. The United States government could, for example, take additional steps to promote a supply response outside OPEC by adjusting its own fiscal regime to allow US companies fully to offset exploration costs outside the United States and to credit quasi-tax payments to foreign
governments against their United States tax liabilities(10).

Finally, energy security may itself warrant efforts to accelerate the development of alternative fuels. If a diversified fuel mix is a central longer-term goal of energy security, appropriate government intervention should be considered for bio-mass, solar and synthetic fuels.

In the broader context, the long-term outcome will be influenced by how propitiously the short-term benefits and costs occur. The world economic recession has seriously weakened the international trade and financial systems. This is the second year in which international trade has contracted, after thirty years of expansion at 7% annually. The repercussions, particularly on employment in the industrial countries, have prompted an increase in protection. A vicious circle, in which shrinking trade and protection provoke one another, threatens to set in unless world economic activity revives soon. Furthermore, because of adverse trade balances and another feature of the recession, high interest rates, the ability of developing countries to service their debt has deteriorated acutely. An unprecedented number have recently rescheduled their debt and a few have come close to outright default. There is a high risk of an international financial crisis, which would significantly restrict the international banks' capacity to finance world trade and investment.

If the burdens imposed by higher oil prices are not alleviated before the full weight of the burdens imposed by lower oil prices have to be shouldered, the international trade and finance systems could come under intolerable strains. It is important that the US and other industrial economies recover robustly, increasing imports and generating growth in each other's and LDC's exports, before the impact of retrenchment in the oil-exporting countries strikes the world economy. Similarly, the international financial system may be unable to cope with the new debt problems of oil exporters if it is still struggling with the older debt problems of oil importers. The best way to avoid such possibilities may be to enable the multilateral official financial institutions, with the coordinated support of the industrial countries, more actively to assist those oil exporters facing most difficulty in adjusting to lower oil prices.

The Soviet Union
It is, ironically, difficult to discuss the position of the world's largest producer of oil - and its potentially largest producer of gas - under the same general rubrics that are used to
analyse the rest of the world. For in central ways the Soviet Union and its allies are unique. Not integrated into the world economy, the Soviet Union has been able to reap a windfall as a price follower of OPEC. Last year it exported almost 1.3 million b/d to the West. These exports ranked the Soviet Union roughly equal to the mean of OPEC countries in terms of market share, and provided almost 60% of its export earnings. In recent years the United States has made the Soviet energy sector a target of its foreign policy, seeking to deprive the Soviet Union of future energy export earnings. Some analysts, particularly in the United States, advocate a very different policy of keeping the USSR energy independent so as to reduce any long-term interests it might have in Middle East energy supplies.

The short-term effects of declining prices on the Soviet economy have been negative, as Jonathan Stern demonstrates in Chapter 4. The drop in world oil prices can cost the Soviet Union as much as $3 billion in 1983, compared with oil export earnings of more than $11 billion in 1981. The protection of this major source of export earnings must be a central goal of Soviet policy. This was evident in the immediate response to the OPEC decision of March 1983 to reduce the marker price to $29: the Soviets dropped their prices even more in an aggressive effort to maintain their market share.

This unexpected action by the Soviet government, at the very time when a reduction in export volumes had been anticipated, is not at all puzzling. The Soviets needed to find a way to redress the lost foreign exchange earnings, and they did so by a forced shift in volumes to the export sector, probably through conservation and fuel-switching, which will have been facilitated by the decline in economic growth. The action also was of potential short-term value in further dividing the NATO allies over how to deal with the Soviet energy sector. And by bolstering exports the Russians created an opportunity to open a dialogue with OPEC over pricing and production levels. This would represent a useful foreign policy overture, since most of the Arab Gulf countries have refused to recognize the Soviet Union or open discussions with it.

The Soviet Union is, however, likely to reduce its oil exports over the decade and to increase substantially its exports of natural gas to Western Europe. It will in the process become a major participant in international gas trade, in fact perhaps the most important single player. Although it will be much more important as a supplier of gas to Western Europe than as a supplier of oil to the West, the
Soviet Union probably will not use this position to exert political influence. In the longer run, the Soviet government will probably allow Western companies to participate in the exploitation of high-cost frontier areas. The purpose will be to accelerate the development of export earnings, and possibly to enjoy the continued secondary benefit of further dividing Western policies towards the USSR. The Soviet Union has been affected by and, in turn, has affected the international political economy as a result of lower prices. But these impacts have provided little more than a fascinating side-show to the main events in the three rings under the big tent. Neither the Soviet Union as a great power, nor the petroleum sector, nor even East/West relations have been, or are likely to be, greatly affected. The main consequences, as Stern explains, are to be felt in the relations between Russia and its dominions in Eastern Europe.

The overall balance
There can be little doubt that there have been continuing changes in the structure of the international petroleum economy for the past thirty years. Each of the regimes which have controlled the petroleum sector appears to have carried within it the seeds of its own transformation. The OPEC-dominated energy economy of the 1970s in this sense helped to breed the more competitive environment of the 1980s. It seems that this would have been the case, although the timing would have been different, even had the price escalations of 1979-81 not been so steep. Given the pace of conservation and fuel-switching, the political structures of the energy economy could not support $34 per barrel. The price decrease was probably inevitable.

As this essay, and most of the others which follow it, posits, the short-term benefits of an oil price reduction to a stagnating world economy which has experienced a steep decline in productive activity far exceed the costs. The benefits are diffused throughout most of the world economy. The costs are concentrated in the oil-exporting countries. The longer-term balance is less clear. In part this is because where one is going depends on - and is less important than - how one gets there, a question intentionally avoided by these essays. There could be, however, a critical difference between a world energy economy based on stable oil prices for an extended period of time, and fluctuating prices. If OPEC is unable on its own, or in cooperation with other producing/exporting countries, to stabilize prices, the result may well be much greater price variability - rapid changes in
price reflecting changes in demand. Extreme fluctuations in prices could have a negative impact on virtually every area touched by the energy sector, but especially on longer-term investments, which would be greatly discouraged. Yet the more competitive environment, which seems ineluctably to be emerging, will have much less price rigidity than the one dominated by OPEC.

Whether the evolution of the petroleum sector will be smooth or bumpy, the emerging international investment order will be much more open to private company investments than that of the late 1960s and 1970s. It seems that competition among companies for access to secure supplies, which characterized the investment environment in the 1970s, is being replaced by a new environment, characterized more by competition among governments for investment capital. A major challenge to the parties concerned will be to create among private companies, local companies and host governments a contractual relationship which will be more equitable than those of the past and so better able to withstand the vicissitudes of demand.

Other changes could either reinforce or dampen price variability. Change is likely in inventory holdings. There was an enormous run-up in inventories between late 1978 and mid-1980, and a rundown ever since. Some have argued that in the future, because of the growth of new institutions such as the expanded spot market and the futures market, and because of changes in companies' relationships with customers, stocks will be much less important and too costly for companies to maintain at high levels. The reduction in company and consumer stocks, which many regard as inevitable, should also result in greater seasonal swings in demand on OPEC than has been the case(11). If seasonal shifts in demand become enormous, they could result in larger price variations not only for petroleum, but also for tanker rates.

Perhaps working in the other direction is the development of a futures market. A slack market will create opportunities for the development of a futures market in crude oil and production products. A futures market has already developed internationally in some petroleum products, specifically in home heating oil and gasoline, and is now beginning in crude oil. This development is almost an inevitable result of the growth in the number of national oil companies, who find it in their interest to trade futures in crude in order to assure themselves of an income stream for planning purposes.

If the current glut persists, we can expect the national oil companies of countries such as Mexico, Norway and the
United Kingdom to want to hedge and reduce the uncertainties associated with their income projections. On the customer side, we can expect a number of public and private institutions to want to buy crude for future delivery, just as they now buy resid, the prime motivation being relative certainty with respect to expenditure. A slack oil market would also make a futures market attractive to a number of marginal exporting developing countries whose most important goal would be stable income on which to base economic plans for the domestic economy. No better means exists to ensure them a steady stream of income than dealing in futures.

Changes in the structure of companies work in the same direction. With governments having more control over resources, and with a long-term supply overhang, the oil companies have much less reason to be concerned with access to supplies than they did in the past. They have discovered the profitability, and for some the necessity, of developing oil-trading operations.

In short, the bases for an institutionalized crude oil futures market exist. It is an open question, however, whether such a market will smooth spot price fluctuations, or whether the operations of speculators will exaggerate them. At a minimum, it would reinforce the trends which appear increasingly to deprive OPEC of its ability to administer world oil prices.

Some OPEC countries understand this and harbour hopes of a dialogue with the major oil-consuming countries. They assume that, on the one hand, both oil-exporting and oil-importing countries will have an interest in preventing the market-place from replacing entirely an administered pricing regime; and, on the other hand, that in the future, OPEC will be unable to play the role of price-maker. Rather, joint efforts will be required, at least to maintain a floor price.

Proposals for an international producer/consumer dialogue have been put forward regularly since 1973. They have never got off the ground for any of a number of reasons. Most often, the consuming countries were too obviously the 'demandeurs' and their bargaining power was too limited. Internal disagreements on both sides made it almost impossible for coherent discussion to take place. And, there were those on the consuming country side who almost always convincingly argued that a dialogue was pointless when no one could impose a ceiling price in a tight market-place.

A dialogue need not, however, result in, or even aim to establish, a full oil commodity pact. A narrower forum than
OPEC's thirteen members and the International Energy Agency's twenty-one could well meet to discuss matters of common concern. They could try to develop a better understanding of actions that might be in their mutual interests, and of actions to be avoided because they would cancel each other out. In the current weak market-place, now may be the most propitious time to launch a dialogue between OPEC and the IEA. Governments on both sides might well have good reasons to want to avoid a drop in the floor price of oil, as well as to avoid rapid price movements. Ironically, if political conditions now seem ripe for such a dialogue, the underlying structural changes in the petroleum market may be so great that such a dialogue could be futile. The market may now be out of the control of a few powerful participants and increasingly subject to the interplay between demand and supply and the participation of multiple, weaker participants.

Notes
3. For solid discussions of the cyclical aspects of the oil market, see Øystein Noreng, 'World Oil Market Prospects in the 1980s in the Context of Three Different Perspectives' (pp.89-102), and Robert Mabro, 'OPEC's Future Pricing Role May Be at Stake' (pp.147-54), in Miguel S. Wionczek, ed., World Hydrocarbon Markets (Oxford, Pergamon Press, 1983).
7. Bijan Mossavar-Rahmani has recently argued that for OPEC to play the balancer requires these enormous production shifts because of what he calls 'the OPEC
multiplier'. Since OPEC countries are the marginal suppliers, 'a small increase in world oil demand results in a disproportionately large percentage increase in demand for OPEC oil, and a small decrease in world oil demand results in a disproportionately large decrease in OPEC oil'. *The OPEC Multiplier: Rebound of the Oil Exporters?*, Cambridge Energy Research Associates (November, 1982), p.4.


10. This is recommended in *Third World Petroleum Development* (Washington, DC, National Petroleum Council, 1983).

Oil-importing Developing Countries


K. Nashashibi (1981), Supply Framework for Exchange Reform in Developing Countries: the Experience of the Sudan, IMF Staff Papers.


