The North Sea and the United Kingdom economy: some longer-term perspectives and implications

The Ashridge Lecture given by the Governor at the Café Royal in London on 20 November 1980.

Introduction

I am grateful for the invitation to speak in this annual series of lectures. As you will see, I have chosen a subject which may appear at some remove from my immediate financial responsibilities and preoccupations. I shall not be concerned with developments in money. And I shall be looking beyond the present recession. For it seemed to me that it might be appropriate on this occasion to address a wider theme and to try to set in perspective the longer-term consequences of the development of North Sea oil.

This country has now become virtually self-sufficient in oil and could remain so until the end of the century and perhaps even beyond. The world has also experienced a massive increase in the real price of oil over the past decade. Taken together, these developments present this country with challenges and opportunities greater than any since the war. But if we are to derive maximum benefit, we need to be clear where we stand, both in relation to our own position in the past and to that of other countries now, and we need to be clear what our options are.

Approaching this subject as a central banker before this distinguished audience, I speak with diffidence. But it appears to me that the significance of what has occurred has not as yet been correctly and fully assessed. It has recently been argued that because we have oil, industry will have to contract. That view I shall seek to controvert: it appears to me to stem from a view which is too restricted both in its international range and in its historical perspective.

My object tonight then will be chiefly analytical—to present the problem in sufficient perspective. I shall accordingly start by describing the impact on the world economy of the great increase in the price of oil in the last decade. In this international setting the United Kingdom stands out as exceptional among industrial countries in having ceased to be dependent on foreign supplies of oil. This oil has not been a free gift: we have had to pay a lot to develop the North Sea and that needs to be included in the reckoning. Even so, we clearly have a great advantage compared with most other countries in a world where oil has become enormously dearer.

In exploring the implications of this analysis of the significance of North Sea oil production, I shall seek to suggest the conclusions that follow for the rest of the economy, and in particular the industrial sector; and shall consider also the implications of North Sea oil being a wasting asset.

International perspective

Let me, before dealing with the situation in the United Kingdom, start with the world scene. I hardly need remind this audience of the vast changes in the international oil market that have occurred over the past decade. In this relatively short period, the world economy has experienced two major rounds of increases in the price of imported oil, in 1973–74, and again last year. The real price of oil—that is, its price relative to other goods and services—has risen by some 400 per cent since 1970. Each of these two phases of price increase raised the import bill of industrialised countries by about 2% of their combined GDP—a very large amount. I do not need either to spell out its economic consequences in raising the price level in importing countries and, by the same token, in reducing real purchasing power and contracting demand. The effects of the second price surge in 1979 are still working their way through the international economy, as developed and developing countries alike are only too well aware.

Looking beyond the immediate problems, the most striking result of the rise in the price of oil has been the massive diversion of real income. Because demand is highly inelastic, the income of oil-exporting countries has expanded very greatly at the expense of the oil-importing countries. In 1970, a typical oil-importing industrial country, which is what the United Kingdom then was, had an oil import bill amounting to some 1%–2% of its GDP. This figure is a measure of the value of exports that we had to produce and sell in order to pay for the oil that we needed to import—which was then cheap. Now, a decade later, as a result of the rise in the real price of oil this resource cost has greatly expanded. A simple example will illustrate the magnitude of the change. The cost of a given quantity of oil has risen fivefold. Thus, if the quantity of oil imported expanded in line with real growth, a country which spent 1½% of its GDP in 1970 producing exports to pay for oil would now have to spend almost 8%. In practice, some economy has been achieved, but this barely modifies the result. The percentage of GDP spent on oil in most developed countries without oil of their own has risen from some 1%–2% in 1970 to perhaps 6%–8% now—an increase in resource cost for such countries equivalent to 5%–6% of their total output. This is an indication of how much worse off importing countries are and of how much the oil exporters have gained.

In the longer term, this proportion of output will have to be diverted into exports in order to pay for oil. But the full longer-term adjustment will take time to be effected—

perhaps in some cases seven to ten years. The oil-exporting countries are unable to spend the whole of their increase in income immediately. Thus, after both of the major price rises, these countries moved into large current account surplus, which was matched by deficits elsewhere. By 1978, the OPEC surplus which followed the 1973 price rise had been more or less eliminated. The OPEC surplus in 1980 is in excess of $100 billion, and may this time be more prolonged.

These surpluses—and the counterpart deficits in the consuming countries—have both favourable and unfavourable effects on the interdependent world economy. On the favourable side, they prolong, while they last, the period in which the necessary structural adjustment can be undertaken in the consuming countries. In effect, these countries as a group are given the opportunity of financing their imports of oil by borrowing, rather than by immediately diverting resources to pay for higher-priced oil. In saying this I do not forget that this breathing space is not available to a number of countries, particularly those which do not have access to international capital markets.

In the meantime, the OPEC surpluses have brought very large changes in international flows of capital, and over time in the ownership of financial assets. In my view, the international financial system has coped well in accommodating these changes, and the recycling mechanism has worked much better than many expected. But there remain many problems still to be faced. It seems inevitable that the volatility of international capital movements, and of exchange rates, which has characterised the 1970s, will remain as at least a potential problem for the 1980s.

Thus, evidently, the changes in the world at large have been vast. There has been a massive diversion of real income from consumers to producers of oil. Major changes are in train in industrial structures towards producing exports to pay for the higher-priced oil; and, within countries, towards less energy-intensive techniques. The search for, and development of, substitute sources of energy has been intensified. Many of the adjustments are not complete—some are just beginning. And over the future there is a cloud of uncertainty, with fears about possible further changes in the price of oil, and about security of supplies. This is a difficult, indeed dangerous, world environment. Let me then turn to consider the position of the United Kingdom in this world picture.

Is the United Kingdom better off because of North Sea oil?

The basic question to which I address myself is this. Is the United Kingdom better off because of North Sea oil? It may seem surprising to pose this question at all. Are we not accustomed to think of it as a gift of nature? The answer depends on how far back one goes: better off than when? We are better off than we would be if we had to import our oil at present world prices. But taking account of what we have had to pay to develop the North Sea, we are not better off than we were ten years ago, when we imported oil at much lower world prices. Let me develop these points.

In 1970, the United Kingdom was producing negligible quantities of oil. Like most other developed countries, we imported the oil we needed—then about 750 million barrels per annum—and paid for it by exporting other goods and services. That amount of oil in 1970 cost us then about £700 million, or about $1\frac{1}{2}$% of GDP. We, like the other importing countries, were getting our oil cheaply by today's standards.

With the rise in oil prices in 1973, Britain's oil bill rose sharply, and there was a major impact on the balance of payments. Even then in 1973, however, North Sea gas was already building up substantially. It was also well known that North Sea oil would soon start to be exploited on an increasing scale. As this occurred—importantly since 1976—domestically-produced oil and gas began to replace imports; and our oil import bill started to decline dramatically. By 1979–80, when the second round of price rises occurred, our overall trade account position was relatively little affected. We have become, in 1980, approximately self-sufficient in oil.

So, what does this self-sufficiency in oil—and more generally in energy—mean for the United Kingdom? As a country, we are clearly better off than if we had no oil, and we are better off on this score than our major industrial competitors who now have to import high-priced oil. They, as we have seen, are indeed substantially worse off after the oil price rises of the 1970s. In looking at the way in which Britain's own position has changed over the decade, however, it is important to make a proper allowance for the costs of oil from the North Sea. It is far from costless.

In fact I want to argue that the costs of oil from the North Sea are now in real terms comparable with—in fact somewhat higher than—the costs of obtaining imported oil at the beginning of the decade. In 1970, we were paying about $2.20 per barrel for imported crude. Allowing for inflation and changes in exchange rates, the real price of that oil would correspond to a price of about $7.50 now. The economic cost of the North Sea oil we are consuming today is the resource cost of North Sea exploration, development and production. We know that the investment has been immense. To the end of last year, development of North Sea operations had absorbed a cumulative investment of some £20 billion in 1980 prices, taking account not only of rigs, but also of onshore investment in chemical plants, storage and pipelines. But much of this represents our investment in future output. It is useful to have in mind also estimates of the costs of present production. These vary widely from field to field—I understand from about $5 per barrel, to $25 or more, with an average cost of about $10 per barrel for oil produced this year. On this basis, the conclusion must be that the resource cost of the oil we are using now is somewhat greater than that of the oil that we imported in 1970.

Production on a scale to make us self-sufficient has, however, been rendered economic, and indeed highly profitable, by the relative rise in world oil prices to recent and present levels. Partly because of rising prices, but also because of recession, we are now consuming less oil than ten years ago, perhaps 650 million barrels this year. Proper allowance for earlier exploration and development, as well as for current production effort, thus suggests that we are now using rather more resources to acquire rather less oil. The resources are, of course, being used in a somewhat different way. In 1970, we produced exports to pay for oil. Now we use resources more directly in the North Sea. But even this difference is less than appears at first sight. Much of the resource cost of the North Sea is accounted for directly by imports, or by interest payments, dividends or profits paid abroad as return on the capital put in by foreign investors. Thus to a large extent we are still exporting other goods and services to meet the cost of the oil we consume.

My conclusion is that the North Sea endowment has not made the United Kingdom better off than in 1970. We do of course appear better off than we were in 1974 or 1975, after the first oil price increase, but before the North Sea came on-stream. We are also clearly better off in this regard than countries with no oil of their own. But it is their position that has deteriorated, whilst ours has remained broadly unchanged. At first blush, it seems odd to be saying this at a time when our manufacturing industry is being hard pressed by the rise in its energy costs and by the appreciation of sterling. But I am concerned here with the resource implications for the economy as a whole; and on this basis, the combination of the rising price of oil and development of the North Sea has left the United Kingdom little affected overall, while other countries that import oil are worse off. In practical terms, this is of great significance: there is a clear difference between receiving a large windfall gain and avoiding a large windfall loss that applies to others. The economic response in the two cases should be quite different. For us as a nation, our self-sufficiency should, I suggest, be seen as a reprieve rather than as a bonanza.

The common supposition that we gain from higher oil prices only holds if the United Kingdom were likely to be a net exporter over an extended period. For a country that may not be able to count on more than approximate self-sufficiency over a run of years, higher oil prices will have little direct effect on either the balance of payments or potential living standards. More generally, the rise in oil prices has had harmful effects on world economic prospects: it has accelerated inflation both here and world wide; it has slowed world growth; and it has exacerbated international political tension. As an open economy heavily dependent on world trade, we do not avoid these injurious effects.

The need to maintain our non-oil base

I turn now to the relation of the development of the North Sea to the size of our industrial base. It has been suggested that because of oil it is inevitable or perhaps desirable that industry should contract. The argument is that because the growth of our oil industry involves increased output of internationally-traded goods, other parts of the traded goods sector—principally manufacturing—will have to contract, or grow less fast. In addition, it has been suggested that a high exchange rate is a desirable way of bringing about this structural change. These propositions do not fit with the analysis of the effects of North Sea oil which I have been developing.

Compare our position with that of countries who have to import oil. They are now running greatly increased oil deficits. Their non-oil sectors are being forced to adapt, a process likely to involve an increase in the share of internationally-traded goods and services in total national production. This, as we have seen, is because oil-importing countries will have to pay for their more expensive oil by exporting more or importing less. This necessity is now generally recognised and taken for granted in the oil-importing countries themselves. For many of them the process will mean an increase in their industrial base. As shorthand, I use the word 'industrialisation' to describe this development—though I am aware that many internationally-traded goods and services are not of course industrial products in the strict sense.

By virtue of our possession of North Sea oil, the United Kingdom is a country where further industrialisation in this sense is not required. But this is quite different from the proposition that it is desirable that the United Kingdom should accept a reduction in its production of traded goods other than oil—which, in practice, would mean a reduction in industrial production. This might, perhaps, have been arguable if our industrial structure had adjusted in the wake of the oil price rises of the 1970s, before we became self-sufficient. But it manifestly did not. There has not been an expansion in manufacturing since 1973–74—rather the reverse.

Since I believe it to be important, let me for emphasis put this point in another way. If the United Kingdom is taken to be an economy approximately self-sufficient in oil, in which the real costs of oil are of the same order as in 1970, it would seem that we are one of the few countries in the world where change in the size of the industrial sector is not required on account of higher oil prices. Adaptation is of course needed as industry responds to the higher cost of energy and moves from the production of exports to pay for oil to the production of capital and other goods needed to support oil output. But this takes place within the industrial sector and does not involve or require any reduction in the size of that sector. By contrast, other countries, such as Germany, France and Japan, are having to increase the scale of their industrial base within the span of only a few years to enable them to pay for higher-cost imported oil.

I thus regard the doctrine that a substantial decline in our industrial base is inevitable as needlessly depressing and misleading. What rather is true is that the maintenance of our industrial base will require substantial adjustment within our non-oil economy.

First, our endowment of oil has done nothing directly to mitigate the difficulties of many of our older industries or the problems of low productivity, weak management, indifferent industrial relations and high earnings increases that have played so large a part in the undermining of our international competitiveness in many areas.

Second, important structural change stems from the need in the United Kingdom, as elsewhere, to adapt to high energy prices. It may be objected that, if the resource cost of oil and gas is not much more now than it was in 1970, there is no reason why United Kingdom industrial and domestic consumers should pay the equivalent of world prices for their energy. But lower prices would involve the likelihood of waste rather than economy in the use of this valuable resource. We have to keep in mind that any savings of oil that can be made have a value in international trade given by the world price, not by United Kingdom costs. Higher real oil and gas prices are probably here to stay, and the insulation of British energy users by reducing prices below world levels would slow the pace of the structural adjustment that is desirable and necessary. This is not, however, to imply that energy prices for British industrial users should be higher than those, for example, on the Continent.

The adaptations that will ultimately be required to a high relative price for oil and gas are hard to foresee with precision. I very much doubt, however, that they will involve a process of de-industrialisation. On the contrary, conservation and the development of substitutes such as nuclear power and coal will create large opportunities for industry, both directly and in terms of the investment involved.

Third, rejection of the view that the importance of our industry must diminish does not, of course, mean that all existing lines of activity should be maintained. What is important is the development of new areas of enterprise and activity to replace those that fall out in the inevitable continuing process of economic change. The needs of North Sea operations themselves are relevant here. A recent estimate made by the Chairman of Shell UK suggests that the capital expenditure that will be needed over the next fifteen years to support further North Sea development will be of the order of £40 billion in 1980 prices, with perhaps a further £15 billion over this period required for operating and maintenance. Many British companies have already acquired a considerable capability and built up substantial business in support of North Sea operations. Over the next decade and beyond, investment in North Sea and other offshore oil operations looks set to be on a very large scale, involving correspondingly large and exciting possibilities, not only in our own waters but in other parts of the world, for British companies prepared to make the necessary sustained effort.

A further major consideration is the finite life of North Sea reserves. If we fail to maintain a strong industrial presence during these years of self-sufficiency, we shall face very costly and formidable re-entry problems when the oil starts to run out. For we would not only have consumed the depleting asset, but we would also have left the next generation bereft of an effective capability to generate goods and services to pay for imported oil, when our own has run out, or for more expensive domestic substitutes. And we should not exclude that in some of the new high technology areas, prices might be raised quite sharply against us if we had no production capability of our own and thus became dependent on others. There may be a tendency to assume that, as oil runs out, our native enterprise will enable us to move with reasonable facility into whatever are by that time the new non-oil areas of activity. But we should not underestimate the scale that many modern technological processes require in order to operate efficiently. If we neglect them during our period of oil self-sufficiency, the re-entry price into such industries in terms of technology, management and specialist skills to be acquired, might be large indeed.

To recapitulate, improvement in our standard of living continues to depend, despite North Sea oil, on our success in non-oil areas of activity. Progress will depend, in a tough world environment, on a combination of improvement in our cost competitiveness in conventional areas of activity, and speed and flexibility in seizing the opportunities that will exist—massively so in support of the oil industry—to generate products and services where we are not only competitive in price but also technologically and in other non-price respects ahead of the competition.

How much should we consume?

I turn now to the question—how should North Sea oil affect our patterns of consumption and investment? The first point I want to make is that North Sea oil is a capital asset, part of our national stock of wealth. We could raise our living standards by borrowing against it. Or, to the extent that it were technically possible, we could raise production of oil to become substantial net exporters of oil in the short term, so as to consume the extra imports that we could buy. In either case, we would be living better now, but at the expense of the future. This would, in my view, be wholly misguided. North Sea oil should not be seen as transforming the possibilities for increased living standards. These must continue to depend, as hitherto, on improvements in the performance of our non-oil economy.

As a capital asset the North Sea endowment can be transformed, through the markets, or more generally through the economic system, into other capital assets of similar value, or can be consumed without replacement. A major question is whether we should seek to get oil out of the ground as quickly as possible, transforming the proceeds into other capital assets at home or overseas. Or would it be preferable to leave oil in the ground, or, say, to limit production to not more than our current needs? Determination of what may be termed an optimal depletion policy depends on many other factors outside the scope of this address, but it must take into account a comparison between expected real rates of return on investment in

general (whether at home or overseas) and the expected development of the real price of oil. I do not myself have any confident view about what this optimal rate of depletion would be. But I feel confident in suggesting to you that, within whatever are the technical and other constraints, the rate of depletion should be determined as an investment decision, and not with a view to any particular benefit in terms of consumption in the short term.

North Sea oil is not only a capital asset: it is a wasting asset. We do not know how many years of self-sufficiency in oil lie before us, but we do know that the oil will eventually run out. We can also fairly confidently expect that the resource costs of the oil are likely to increase. Even to regard North Sea oil as a means of maintaining, but not increasing, our existing living standards, might therefore be held to involve an inadequate allocation of resources to investment and an excessive allocation to consumption. Prudence would dictate that, as we use up North Sea oil, we should to a considerable extent replace it with other assets, by greater investment either at home or abroad.

Investment abroad has increased since the removal of exchange control a year ago. But overseas investment seems unlikely to match more than a modest part of the resources that might be required to safeguard our future position. Over the longer run we need to match a substantial part of the depletion of our oil reserves by investment at home.

Industry in all countries is suffering from substantially higher energy costs. In this country, however, there is a positive side of the account—the growing tax take from the North Sea operations. Given the prospective rising revenue from North Sea oil production, the Government could in principle seek to influence the pace of home investment, either through reducing its own borrowing needs—thus tending to reduce the cost of capital to corporate investors—or by fiscal easement. What is important is that choices among the available options should recognise the importance of investment to our future well-being. This points to a case for bias, over time, in the direction of favouring investment rather than consumption.

Some further comments

I have said little so far about the effect of North Sea oil on the exchange rate—a factor which many in this audience may regard as the most important of all. This is because I wished to deal principally with the separate question of how oil price rises and the North Sea affected the need for structural change in the economy as a whole. I have argued that it is neither necessary nor desirable that the production of non-oil goods and services should fall as a proportion of our gross domestic product. But we have the fact of substantial appreciation of the exchange rate, and the possibility of a continuing strong demand for sterling; and this inevitably bears heavily on many sectors of industry.

Let me offer a few brief comments. We are fortunate in not having to expand the production of traded goods to pay for the same quantity of dearer oil, as other countries are having to do. They may therefore have to have a lower exchange rate—which means a somewhat higher exchange rate for us than otherwise would be the case. Sterling has also been affected by the immense diversion of purchasing power from oil-importing countries to the oil exporters. Even though the United Kingdom is largely insulated from these major changes by having North Sea oil, there are indirect effects. The oil exporters use some proportion of their increased revenues to buy goods and services from the United Kingdom. As part of their external portfolio management, they also acquire financial assets in sterling. Many other factors are also influencing the exchange rate, including the present recession and the strength of the present policy stance directed against inflation. Given the many factors at work, and with the world economy in substantial disequilibrium, it is difficult to disentangle and measure the effect of North Sea oil alone on the real exchange rate.

But sterling clearly is stronger than if we did not have oil. This involves substantial potential benefit in two main respects. First, as an economy we can obtain our imports on more favourable terms, because our terms of trade are improved, and we are thus better off. Second, we benefit from the effect of lower import costs on domestic costs and prices.

On the other hand, there is the potential damage to industrial competitiveness that may be done by exchange rate appreciation. In seeking to assess the longer-run balance between such benefit and cost, the key question is whether nominal exchange rate appreciation is likely to involve comparable real appreciation or whether, as a result of compensating cost and price adjustments, the real exchange rate remains broadly stable in the long run. Because of repercussions on costs and prices, the effect of nominal appreciation in the exchange rate can be less than appears. How much less will, of course, be determined by the behaviour of inflation.

I have not been concerned in my address tonight with the immediate issue of combatting inflation. We are fully engaged in that fight; and, until we have emerged successfully from it, progress towards some of the structural adjustments that we need in the longer run is hampered.

Summary

Let me then summarise the main longer-run considerations to which I have sought to draw your attention.

The first is that countries without oil of their own face the need for particularly large-scale adjustment. Over and above the necessity in all countries for energy conservation and substitution in the wake of higher oil prices, these countries also have to export more to pay for their oil. Thus their adjustment is likely in part to take the form of an expansion in their capacity to produce tradeable goods.

Against this background of what has to happen to other countries, the United Kingdom is obviously fortunate in its

endowment of North Sea oil. It is natural to fall into the habit of imagining that we are better off because of it. A closer look suggests that this is misleading. There have been substantial costs involved in the extraction of North Sea oil—many of them arising from imported materials or capital—which must be taken into account. Looking over the decade of the 1970s, it seems that this country, favoured as it is, nevertheless uses more resources now in acquiring oil than in 1970. The combined impact of North Sea oil and international oil price rises has thus not left us better off over the last decade; but the problem of other countries has worsened.

This is not a mere pedantic distinction. It belies the notion, currently gaining acceptance, that because of a supposed bonus from North Sea oil, Britain's production of tradeable goods will need to decline. On the contrary, the United Kingdom will ultimately have to expand non-oil production when North Sea oil tails off, or becomes much more expensive. This underlines the need to complement the depletion of North Sea assets with additions to our capital stock in other areas, and thus the case for bias, over time, in the direction of favouring investment rather than consumption.

The conclusion I draw is that this country will have to continue to rely on improvements in the efficiency and output of our industrial base—industrial base in the wider sense that I have been using in this address—for improvements in our standard of life. Having North Sea oil both enables and obliges us to take a long view of our future development. We enjoy the great advantage of a substantial insulation of real national income from higher oil prices—something not available to most of our trading partners—and we have greater time to draw on this strength while we seek to get the underlying conditions right to enable us to make best use of our endowment. If we can take the opportunities that are available to us in a responsible and disciplined way, we should be able to ensure both a sustainable improvement in our standards of living in the 1980s and also enable our successors to benefit even after the much more distant time when the flow of North Sea oil ceases to be sufficient to meet our needs.