

NUPI notat

Nr. 384

Juli 1987

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Norway's OPEC Policy

Adjustments of Norwegian output of oil (10-20-30 %) cannot in itself be considered especially significant by market standards. However, because of the rise in production in the years to come and Norway's role as an oil exporting nation outside OPEC in the Western World, Norway is viewed with increased interest by all important actors in the oil market. It is the market political role of Norway that gives her some significance, if any, to speak of in the market. Being an oil nation for decades to come, Norway needs, of both economic and political reasons, to formulate a deliberate policy in balancing between the OPEC-countries and the IEA. The exact formulation of the policy should, however, be analyzed further.

This paper was presented at the International Association of Energy Economist's (IAEE) Conference "World Energy Markets: Coping With Instability" in Calgary, Alberta, Canada July 6-8 1987.



NORSK UTENRIKSPOLITISK INSTITUTT

**NORWEGIAN INSTITUTE
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ISSN 0800-0018

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OLE GUNNAR AUSTVIK:

NORWAY'S OPEC POLICY

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Introduction

Norway is a country with strong economic interests in a stable oil price on a reasonably high level, and with that an OPEC of a certain strength. At the same time she is economically, politically, historically and culturally a part of the oil consuming Western World.

This paper shows, in brief, facts and figures of the petroleum's importance in Norwegian economy, possible and factual Norwegian production levels, cost figures for North Sea fields and important international relations for Norway. This establishes some platform for a discussion of Norway's role as an oil exporting country in the Western world, including the relation to OPEC.

PETROLEUM IN NORWEGIAN ECONOMY

Over the last decade, Norway has become highly dependent on oil and gas revenues. In 1985, the value of petroleum production represented 19 per cent, and petroleum exports 17.5 per cent of the Norwegian Gross Domestic Product (GDP). Petroleum exports' share of all commodities exported was approximately 50 per cent and its share of all exports, services included, was approximately 37 per cent.

However, in 1986, when oil prices fell from an average of 27.6 to 14.2 U.S. Dollars per barrel, and a bit more in Norwegian currency because of the decline of the dollar value, the value of production fell by ca. 30 Billion Norwegian Kroner (ca. 4.5 Billion U.S. Dol-

lars¹).² Production value's GDP-share fell to ca. 12 per cent, exports to about 11 per cent. Petroleum's export share of all commodities exported fell to 42 per cent. The share of all exports, services included, to ca. 27 per cent. Trade surplus changed from 41 (ca. 6 Billion U.S. Dollars) to a deficit of ca. 18 Billion Norwegian Kroner (ca. 3 Billion U.S. Dollars).³ Thus, the level of the oil price has a fundamental impact on the Norwegian economy.

¹ One dollar approximated 6.6 Norwegian Kroner pr. May 1987.

² The time lags implemented in the gas contracts implied that the 50 % fall in oil prices only affected gas prices in the Western European gas market about 10 per cent in 1986 (See Austvik, July 1987). Thus, a price of oil at 14.2 dollars has a larger impact on the value of Norwegian petroleum production than the 30 billion Norwegian kroner in 1986. An estimate gives an additional decrease in production value; approximately 10 Billion Norwegian Kroner annually at today's level of production of natural gas in Norway. This means that a decline of the oil price from 27.6 to 14.2 dollars at today's exchange rates, implies a fall in value of production of about 40 Billion Norwegian Kroner, or ca. 6 Billion U.S. Dollars, on an annual basis.

³ Ca. 60 per cent of the deterioration of the trade balance was caused by lower value of the petroleum exports. The rest was due to a deteriorated balance between other commodities and services traded, mainly a sharp increase in import figures.

A. Norwegian Economy and the Petroleum Incomes

Billion Norwegian Kroner

	1981	1982	1983	1984	1985	1986 ⁴	%
Gross Domestic Prod.	328	362	402	453	502	516	100%
Petroleum							
- Exports ⁵	51	57	68	81	88	57	11%
- Taxes paid	27	30	31	39	47	36	-
- Taxes billed	26	39	35	42	52	18	-
All Exports	156	165	184	215	235	194	38%
Commodity Exports	107	115	133	157	173	136	26%
Trade Surplus	26	20	32	42	41	-18	--
Oil Price USD/BBL ⁶	36.5	33.3	29.8	28.7	27.6	14.2	
Exch. Rate NOK/USD	5.75	6.45	7.30	8.16	8.60	7.40	
Oil Price NOK/BBL	210	215	218	234	237	105	

Source: Central Bureau of Statistics, Ministry of Oil and Energy, Ministry of Finance.

The Norwegian Continental Shelf covers an area that is many times larger than Norway itself. Till now, all production has taken place south of the 62 degrees parallel, an area of ca. 140.000 km². This is only a small part of the Shelf, and step by step areas north of the 62. parallel may come into production, too.⁷

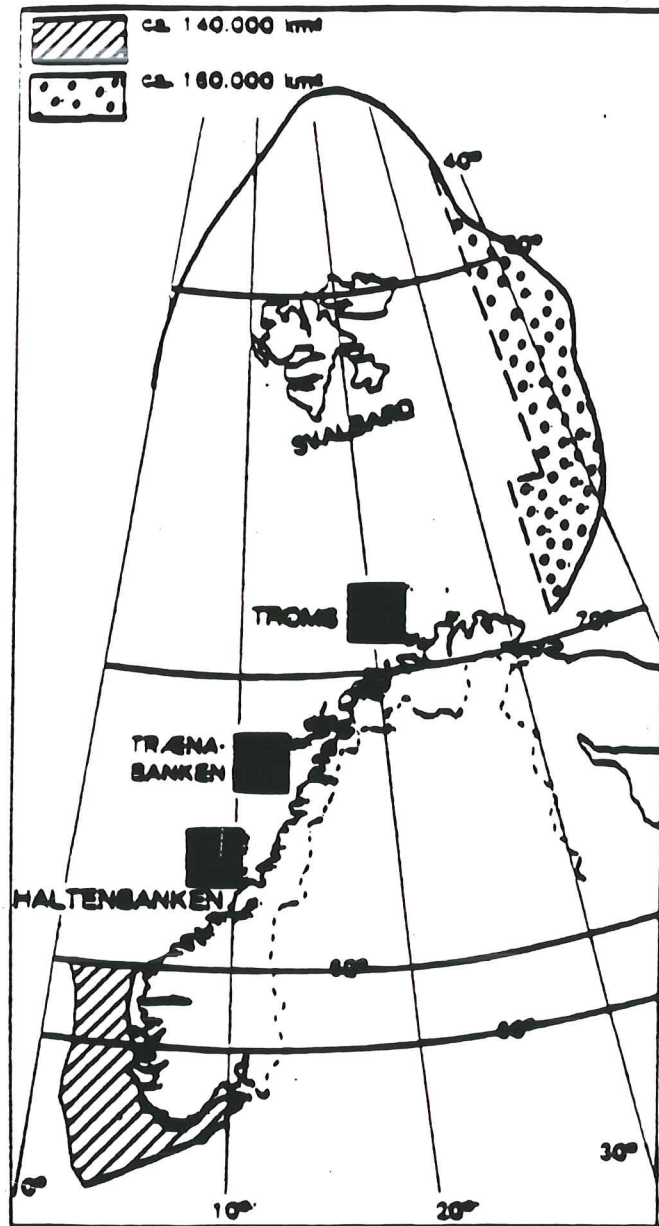
⁴ Preliminary figures.

⁵ Includes crude oil, natural gas, NGL and transport services.

⁶ Ekofisk prices f.o.b. Teesside.

⁷ For instance, the area in the Barents Sea disputed with the Soviet Union is larger; ca. 160.000 km².

B. Map. Norwegian Continental Shelf



Out of the figures for proven reserves of approximately 3700 million tons of oil equivalents estimated in January 1985, 2/3 is natural gas. 50 per cent of the gas reserves are in the Troll field. The largest oil fields are Statfjord, Gullfaks and Oseberg. The proportion of oil and gas in the ground is expected to

be about 2:1 in the rest of the Shelf, too. Thus, as new areas are being mapped, the reserve figures are, on the average, expected to rise with the same proportions of oil and gas as now.

C. Remaining Reserves in the Norwegian North Sea

January 1985, South of 62°

Million Tonnes of Oil Equivalents

Field	Oil	Gas	Total
Ekofisk Area	90	126	216
Frigg Area	0	81	81
Murchison	6	-	6
Statfjord	251	40	291
Valhall	13	11	24
In production	360	258	618
Gullfaks (faze 1)	114	8	122
Heimdal	2	34	36
East-Frigg	-	12	12
Ula	24	1	25
Oseberg	144	71	215
Under development	284	126	410
Prod/development	644	384	1028
Considered	474	2199	2673
-of which Troll	46	1287	1333
Total reserves	1118	2583	3701

Source: Norwegian Petroleum Directorate

In the eighties oil production has shown a steady rise, while gas production has been rather stable. The total figures reached a preliminary peak of 68 million tons of oil equivalent in 1986.

D. Norwegian Oil and Gas Production
Million tonnes of Oil Equivalent

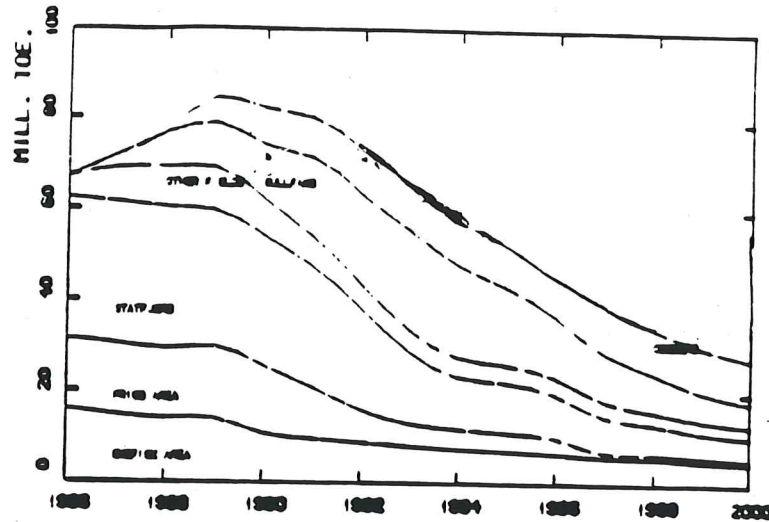
Year:	Oil:	Gas:	Total:
1981	23.507	25.200	48.707
1982	24.484	24.445	48.929
1983	30.564	24.455	55.019
1984	35.093	26.292	61.385
1985	38.445	25.491	63.936
1986	42.293	25.653	67.946
Fields 1986:			
Ekofisk Area	8.660	7.303	15.963
Statfjord	29.393	2.724	32.117
Frigg Area	0	12.795	12.795
Murchison	969	52	1.021
Valhall	2.258	430	2.688
Heimdal	0	2.311	2.311
Ula	726	38	764
Oseberg	252	0	252
Gullfaks	35	0	35

Source: Norwegian Petroleum Directorate

Norway's own consumption of petroleum products is about 8 million tons. Thus, almost 90 per cent of Norwegian petroleum production is net exports.

In 1990, petroleum production is planned to increase to more than 80 million tons of oil equivalent. The increase is caused by a higher oil production alone, mainly from Gullfaks and Oseberg. Production will then fall towards year 2000, unless new projects will be decided (which, of course, is most unlikely not to happen).

E. Projected Norwegian Output Levels
Fields in production or under development



Source: Norwegian Ministry of Oil and Energy 1986

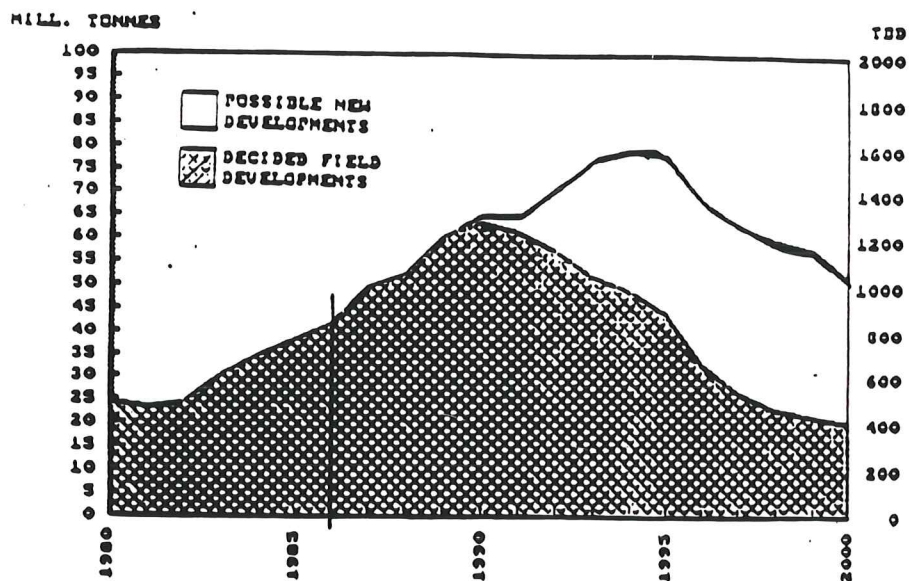
The increase in oil production we are now facing, is, to a certain extent, a result of an "oil option policy" in the first half of the eighties. This policy was implemented in the negotiations for new gas contracts from Norway in the period 1982-85. In short; if Norway could not get the high prices she demanded for her gas, the gas would be kept in the ground and oil fields would be developed instead.

Partly because the gas buyers did not accept this high-price policy, no major new gas contracts were signed in this period. However, several oil fields were developed. The fall in oil prices in the winter of 1986 and, with that, the OPEC pressure on Norwegian output levels of oil, were among the things that led to a change in the gas strategy, expressed by the huge Troll

deal in June 1986.⁸ The pressure from OPEC, if it continues and if Norwegian decision makers will respond to it, may lead to an increased gas production in the nineties. Thus, Norway might well be into a "gas option policy" now, letting oil fields be developed later.

However, the choice of the "oil option policy" in the first half of the eighties will, in the nearest 2-3 years to come, lead to an approximate 50 per cent increased capacity in Norwegian oil production, rising production figures from ca. 1 mbd (ca. 40 million tons) today to about 1.5 mbd (ca. 60 million tons) in 1990. It is a potential for a further increase in Norwegian oil production in the nineties, too. And if decisions are made to do so, Norwegian output of oil could easily rise to a level of 2 mbd in 1995:

F. Possible and Decided Norwegian Oil Production 1980-2000.



Source: Institute of Industrial Economics (IØI)

⁸ A discussion about the Norwegian gas strategy in the period 1982-85 is done in Austvik 1987: "The Western European Gas Market: A Security Price Premium for Norwegian Gas", NUPI-report no.110, June 1987, or an earlier version of the paper published in OPEC Review no.2/1987; "Political Gas Pricing Premiums".

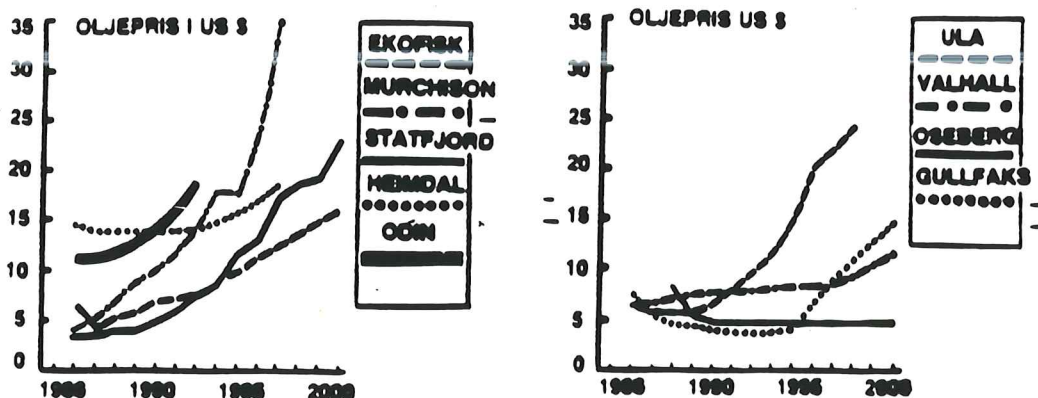
But how sensitive is Norwegian oil production to price fluctuations?

COST OF PRODUCTION IN THE NORTH SEA

Of course, the consequences for production of a price change will be different for fields in ex post position than for fields ex ante. Ex post the investment is already done, and it will be profitable to produce as long as prices exceed variable costs of the field.

The table below, from the Institute of Industrial Economics (IØI) in Bergen, shows anticipated developments of variable costs for different fields in the Norwegian North Sea.

G. Variable Costs for Norwegian Oil and Gas Fields.



Source: Institute of Industrial Economics (IØI)

7 out of 9 fields (oil and gas) that are operating or under construction will cover their costs up to 1990 with oil prices of 10 dollars per barrel. The largest fields: Statfjord, Ekofisk, Gullfaks and Oseberg will cover their costs even if the price is 5 to 6 dollars per barrel. Only the two gas fields Odin and Heimdal need oil prices in the range of 10-15 USD/BBL to cover variable costs.

The graphs also show how each field increases its marginality as the reservoirs are being depleted, and the costs per unit go up.

Price fluctuations will clearly have a larger impact ex ante; fields without the costs already "sunk". Then the price will have to cover depreciation of capital invested as well as profit. In 1983-prices average costs of all North Sea fields were estimated to 12.50 USD/BBL. More than 70 per cent of these were capital costs. According to the Norwegian Central Bureau of Statistics, total costs were approximately 2 dollars less in the Norwegian than in the British sector, as operational costs are somewhat higher in the Norwegian

sector.

H. Capital and operational costs in US 1983-dollars.

Fields under production or development

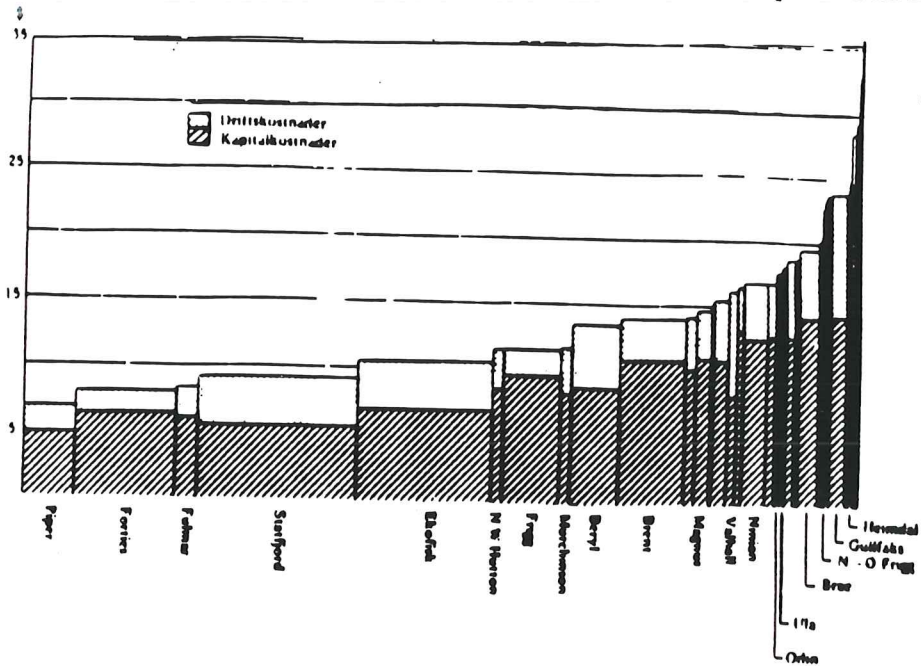
	Capital Costs			Operational costs			Total costs
	Prod	Trans	Tot	Prod	Trans	Tot	
Fields:							
Norwegian	5.43	2.04	7.47	2.28	1.76	4.04	11.50
British	7.32	2.41	9.73	1.66	1.92	3.58	13.30
All	6.55	2.26	8.81	1.91	1.85	3.76	12.57

Source: Central Bureau of Statistics

Capital costs are more than 2 dollars higher in the British than in the Norwegian sector, perhaps because of geological differences and a higher rate of depletion as they have developed numerous small and rather costly fields.

These figures should not be considered absolute, as they depend on factors as how depreciation periods are defined, the size of the reservoirs etc. But they can be used to establish some thumb rules to find the level of the two types of cost involved in developing North Sea fields. And it should be remembered that there are great variations between the fields, as shown in this graph.

I. Unit costs pr. field. US 1983-Dollars pr. barrel



Source: Central Bureau of Statistics.

NORWAY, OPEC AND THE WESTERN WORLD

We have seen that Norway, both from an income and a cost perspective, has vital economic interests in a stable price of oil on a "reasonably" high level and with that, an OPEC of a certain strength. Norway is, perhaps increasingly, dependent on the revenues from the petroleum sector. Yet simultaneously, Norway is economically, politically, historically and culturally a part of the oil consuming Western world.

J. International Organizations important to Norway

SECURITY	Member of NATO
POLITICAL/ ECONOMIC	Member of OECD. Associated member of IEA. Not member of the European Economic Community (EEC). Dependent on their markets. Not member of OPEC. Dependent on "their" price.

This Western world has an interest in a high and stable oil production at "reasonably" low prices. The concern for security of supply corresponds with Norwegian national interests as an oil exporter in having secure purchasers. The desire for low prices is, however, in direct conflict with them.⁹

How then to form a policy in this situation of interests in two parties, OPEC and the Western World?

This is, of course, a consideration that is of both economic and political interest. One part of it is to clarify what possibilities Norway has to influence the price of crude oil. Such an influence can exist directly by being able to affect the price (through altering production levels, price regulation or market psychology), or indirectly, through affecting other nations' or organizations' oil policies (i.e. OPEC's and the IEA's and/or the countries within the organi-

⁹ Of course, other sectors in Norway have a large interest in the growth of the total Western economy. As a nation, however, it is clear that the optimal oil price for Norway is higher than for all of the other Western countries.

zations), which in turn can affect the price.

K. Norwegian Oil and World Oil Production
1985

Country	Mill. tonnes	MBD	Share
Total	2790	57.3	100.0 %
-OPEC	840	17.2	30.1 %
USSR	595	12.1	21.3 %
U.S.A.	501	10.5	17.9 %
Saudi Arabia	175	3.6	6.3 %
Mexico	150	3.0	5.4 %
United Kingdom	128	2.6	4.6 %
China	125	2.5	4.5 %
Iran	111	2.2	2.5 %
Norway	41	0.8	1.4 %

Source: BP Statistical Review of World Energy

L. Norwegian Oil and Imports to the OECD Countries
1986

Country	Mill. tonnes	MBD	Share
Total	905	18.6	100.0 %
-OPEC	527	10.8	58.2 %
Saudi Arabia	137	2.8	15.1 %
United Kingdom	81	1.7	9.0 %
Mexico	62	1.3	6.9 %
Nigeria	58	1.2	6.4 %
USSR	46	0.9	5.1 %
Arab Emirates	46	0.9	5.1 %
Iraq	45	0.9	5.0 %
Iran	42	0.9	4.9 %
Libya	43	0.9	4.8 %
Venezuela	39	0.8	4.3 %
Indonesia	36	0.7	4.0 %
Canada	34	0.7	3.8 %
Norway	34	0.7	3.8 %

Source: IEA/OECD, Quarterly Oil Statistics

In 1985, out of a world oil production of 2790 million tons, Norway represented 1.4 per cent. Of the imports of crude oil to the IEA countries, Norway represented in 1986 a larger share, 3.8 per cent. These market

shares are, however, both so small that Norway, to any noticeable degree, probably can be in no position to regulate the price up or down exclusively by altering her own production or manipulating prices.

If Norway reduces her production without any reactions from other oil producers or from the demand side, the decrease in incomes by the reduction of quantity might be met by an increase in quantity and thus increased incomes to one or more OPEC-countries.¹⁰ But a Norwegian partnerplay may also help motivating OPEC to make further quota deals as well. What the OPEC-countries reaction will be is one of the most important considerations to be made while evaluating the effect of Norwegian market actions.

Without going into that discussion in detail, it is clear that, as long as Norway's economic impact in the oil market does not seem to be significant enough, Norway's foreign oil policy should, on the economic side, be connected with the possible political (on OPEC) and market psychological (on the demand side) effects it may have ("market political" as a common expression). The crude oil market has often proved to be sensitive to such effects, and if Norway can influence them, she might be able to influence the crude oil price on the margin as well.

¹⁰ If one knew that this increase in incomes would be transferred to the poorest countries, one might, from the view of aid to developing countries, perhaps find this acceptable. However, if the Norwegian reduction would go to the richer OPEC countries, this would probably not be a very attractive policy. It seems to be difficult to see how much a Norwegian reduction of production would lead to increased OPEC-production (if any) and even less to which countries. There is a number of other ways to conduct aid policy than through the depletion rate of oil.

Oil Policy is also Foreign Policy

Previously, official Norwegian oil policy followed a "purely commercial" line. This meant that foreign and security policy were not taken into account. Thus, the best foreign policy in this area was, for a long time, considered to be having no policy at all. As a free rider on the market Norway could be in the optimal position to increase production and reap the price benefits of other countries' production reductions.

However, over time, it became more and more difficult to stress such a "purely commercial" line, and one example of the market political significance Norway may have got, is the weight OPEC has given Norway and other non-OPEC producers.¹¹ This weight has politicized Norway's role as an oil exporter, whether we like it or not. OPEC's rhetorical emphasis on the importance of non-OPEC producers, inevitably makes each of them more important in the market, than their respective market shares imply.

Apart from being a petroleum political issue, oil has become foreign politics for Norway. It became increasingly difficult to stress only the commercial sides of Norwegian oil exports to the outside world. The change in government in the spring of 1986 utilized the opportunity to accelerate some necessary adjustments in Norwegian policy in this area.

The OPEC countries themselves will have to follow requests for reductions in their production, or break out of the organization to produce more and thereby increase their revenues. In a weak market situation, it is in Norway's interest that no country breaks out of

¹¹ Norway might have been given some extra attention because of the rise in production in the years to come.

OPEC. Therefore Norway's oil policy should help OPEC to stay together, rather than to counteract the organization in such a situation.

Furthermore, the influence may not only be limited to the internal situation in OPEC. Norway's position as an oil exporting country in the "consuming world" might be used to influence the IEA-countries to advocate the necessity of a certain level on the oil price to avoid future price shocks, too. Norway's close relations to Great Britain implies that her actions might have some impact on the British policy as well.

But, of course, Norway is far more influenced by the bigger countries and organizations herself than she can influence them.¹² For Norway it will always be a question of marginal changes.

Between OPEC and the Western World

However, in political terms, a strengthening of OPEC (in one way or another) will increase the power of the Arab countries in the oil market and with that, their influence in all oil producing countries. A more powerful OPEC, through its widened control of the most important energy market in the world, increases the general Arab international influence as well. Important nations and organizations linked to Norway in other energy, foreign and security relations (i.e. IEA and NATO) have, in alternate degree, opposite interests than OPEC.

¹² Norway may have had, on the demand side, with its sensitivity to expectations, through declarations and (rather symbolic) actions, some (positive) impact on price developments in 1986 and 1987.

Thus, for Norway to utilize a possible market political significance through dealing with OPEC in one way or another can be considered as some break with the other Western countries and might be criticized both in Europe and in the U.S.. This makes it more difficult for Norway to approach OPEC. However, in order to weaken such a criticism, and as we do not depend solely on oil, it is important for Norway to demonstrate that all OPEC partnerplay is done within the framework of the alliances. Similarly may the relation to Israel and the general situation in the Middle East, bring about limitations in the relation to OPEC, with the same demand of balance in the total policy.

The degree of the pressure on Norway from the IEA countries and OPEC will probably vary with how the oil market, in particular, and energy markets, in general, develop. In tight market situations, the IEA will probably put more emphasis on security of supply and a moderate price level than in a weak market. In correspondence, OPEC will probably attach more importance to Norway in a weak than in a tight market.

The perception of the need to satisfy other Western countries and OPEC's expectations about Norwegian oil policy will set the frames for Norwegian freedom of action. As long as Norway is an oil producer of a certain size, she has to have a foreign policy in this area she can stand for, and accept the fact that the pressure may come from either the one side or the other. And the policy should be flexible enough to allow different policy options in different market and political situations.

Small Margins Constitute Large Amounts

If Norway through an active ~~200~~ foreign policy in this area

can increase the price of oil by 1 - one - dollar, the value of Norwegian oil and gas production increases by 6-700 million US dollars per year. This approximates the costs of the 7.5 decrease in production compared to capacity done since February 1986.

However, since Norway's market significance (if it indeed exists) appears to be linked to political and psychological factors, one might think that it should not be absolutely necessary to incur costs in the form of concrete reductions in production to support a high price OPEC policy. As we never will know what would have happened without a Norwegian partnerplay with OPEC, we will never get the answer whether the reduction costs so far have paid themselves by increased oil prices, or by other means, or if the alternative costs would have been higher.

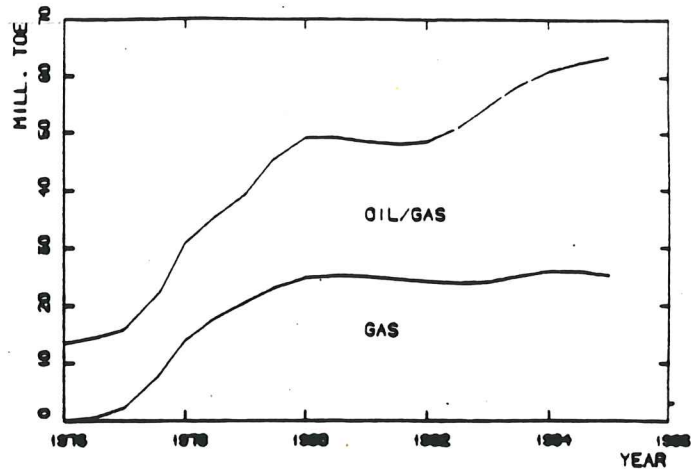
However, the rise in production in the years to come and the symbolic value Norway might have as an oil exporting nation outside OPEC in the Western World, have attached an increased interest to Norway by all the important actors in the market. Thus, of both economic and political reasons, with or without a market significance, Norway needs to formulate a deliberate policy in balancing between the countries in OPEC and in the IEA, being an oil nation for decades to come. To find the best possible position at the lowest economic and political costs in all situations that might appear, the exact formulation of the policy should, however, be analyzed further.

REFERENCES

- Austvik, Ole Gunnar, 1986: "Søkelys på mekanismene i oljemarkedet", NUPI-report nr.97. 1987: "Norway's role in the Oil Market", OPEC Bulletin no. 2 March. "Political Gas Pricing Premiums", OPEC Review no.2 June. "The Western European Gas Market: A Security Price Premium for Norwegian Gas?", NUPI-report no. 110 July.
- Bergesen og Malnes, 1984: Norge som oljeland, Universitetsforlaget.
- Bjerkholt, Strøm & Offerdahl, 1985: Olje og gass i norsk økonomi, Universitetsforlaget.
- British Petroleum, 1986: "BP statistical Review of Energy", London
- Golub, David, 1986: "When Oil and Politics Mix. Saudi Oil Policy 1973-85", Harvard Middle East Papers.
- Griffin & Teece (ed.), 1982: OPEC Behavior and World Oil Prices, George Allen & Unwin, Boston/Sydney.
- Herskedal F. & Kristiansen F., 1987: "Oljepriser og mulig produksjonsstans for felt på norsk sokkel", Institute of Industrial Economics Bergen, notat no.100.
- Hope, C.W., 1986: "Should the UK be talking to OPEC? Strategies for a non-OPEC oil producer", Energy Policy December.
- Heum, Per, 1987: "Stabilization Efforts in an Independent Oil Exporting Country - The Case of Norway", Institute of Industrial Economics, Paper no.4 May 1987. ISSN 0801-3772.
- Lorentsen, Roland & Aaheim, 1984: "Lønnsomhet og kostnader ved olje- og gassproduksjon i Nordsjøen", Økonomiske Analyser 84/2 December.
- Malnes, Raino, 1983: "OPEC and the Problem of Collective Action", Journal of Peace Research, vol 20 no 4.
- Moran, Theodore H., 1981: "Modelling OPEC behavior: economic and political alternatives", International Organization 35/2 Spring.
- Morse, Edward L., 1986: "After the Fall: The Politics of Oil", Foreign Affairs, Vol 64 Spring.

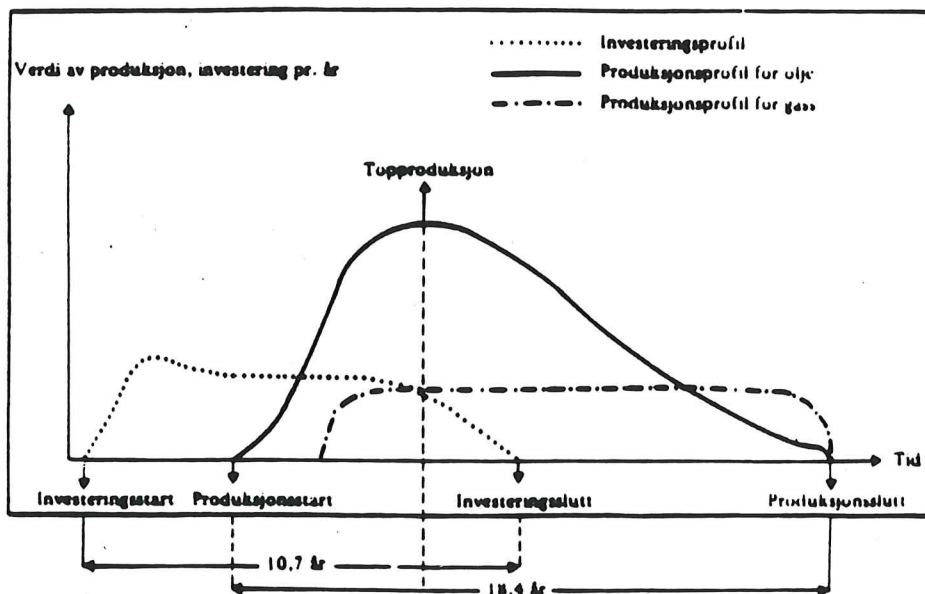
Additional overheads shown:

M. Production History (mill.toe.)



Source: Ministry of Oil and Energy

N. Profile for Investments and Production in the North Sea



Source: Norwegian Reserves in the Norwegian North Sea

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