



4

Petroleum operations in the Norwegian economy

Investment

Other key figures

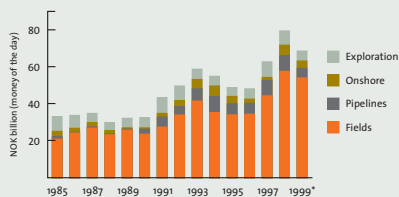


Figure 4.1 Accrued investment 1985-1999
(Source: Statistics Norway) *estimate

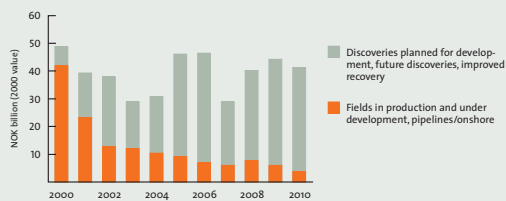


Figure 4.2 Estimates for future investments
in fields and pipelines 1999-2010 (Source: MPE/INPD)

Petroleum production and pipeline transport create substantial revenues for licensees and the state. At the same time, development and operation consume considerable resources.

This chapter presents an overview of resources utilised and value added in production and pipeline transport.

INVESTMENT

Figure 4.1 shows annual investment in the petroleum sector from 1985 to 1999. In 1985-90, this spending totalled about NOK 30 bn per year. It has since increased substantially and reached particularly high levels in 1993 and in 1997-99. These peaks reflect both heavy investment in new fields and spending on gas pipelines to continental Europe.

The following major fields off Norway were under development at 31 December 1999: Oseberg East, Oseberg South, Huldra, Gullfaks satellites phase II, Snorre II, Troll II, Sleipner East, Åsgard, Tune and Sygna.

Construction of the Oseberg Gas Transport and Åsgard Transport pipelines, and the Åsgard gas treatment facilities at Kårstø north of Stavanger, was also under way.

Figure 4.2 shows future annual investment in the petroleum sector. Low oil prices in 1998 and for part of 1999 have increased uncertainty over future investment levels. However, spending is expected to be lower in the time to come than in recent years.

As oil and gas fields are depleted and production ceases, spending will be needed on abandonment or alternative use of installations.

OTHER KEY FIGURES

Figures in tables 4.1 and 4.2 are taken from the national accounts or other publicly-available statistics, and are based on the definitions applied by Statistics Norway.

The figures exclude value creation and resource utilisation in drilling and exploration, the supplies industry, refining and petrochemicals.

Gross product

Gross product is an expression for value creation in a sector during a year, and equals the value of gross production less the value of commodities employed for production. The gross domestic product (GDP) sums the gross product of all sectors.

Export value

This figure is calculated at the Norwegian border. The value of gas exports is calculated at the boundary of Norway's continental shelf. Oil exports are valued at the loading buoy for shuttle tankers and at the continental shelf boundary for pipeline transport. The export value of pipeline services is the transport value in Norwegian-owned pipelines from Norway's continental shelf to foreign terminals.

Accrued investment

Total accrued investment represents overall capital spending on production and pipeline transport, and includes exploration costs and investment on land directly related to petroleum operations.

Norwegian petroleum operations account for a substantial proportion of overall investment in the country. Capital spending by this sector represented about 30 per cent of the total for

Table 4.1 Key economic figures for the petroleum sector, NOK bn (money of the day)
(Source: Statistics Norway)

	1991	1992	1993	1994	1995	1996	1997	1998	1999 ¹
Gross product	100.4	101.3	108.5	108.8	114.0	163.9	172.6	122.3	173.2
Export value	98.3	98.7	105.7	108.5	115.4	160.1	167.7	123.2	167.6
Accrued investment	43.0	49.6	57.5	54.6	48.1	47.5	61.9	78.7	67.0
Employment (thousands)	16.5	16.8	17.6	17.9	17.9	18.0	16.2	16.8	16.1

¹) Estimate

Table 4.2 Petroleum operations in the Norwegian economy (Source: Statistics Norway)

	1991	1992	1993	1994	1995	1996	1997	1998	1999 ¹
Share of gross product	13.2	12.9	13.2	12.9	12.3	16.1	15.7	11.1	14.6
Share of export value	31.9	32.9	33.5	32.4	32.5	38.8	37.5	29.8	36.3
Share of total employment	0.8	0.8	0.9	0.8	0.8	0.9	0.8	0.7	0.7

¹) Estimate

mainland Norway in 1984-90. This proportion was substantially higher in the early 1990s, and came to about 65 per cent in 1993.

The big increase reflects not only heavier investment by the petroleum industry but also lower spending in other sectors.

Investment in mainland Norway has increased over recent years. Estimates for 1999 indicate that petroleum-related investment represented 35 per cent of the mainland figure.

Employment

The direct employment effect of crude oil/natural gas production and pipeline transport is relatively small, accounting for less than one per cent of total jobs in Norway. When indirect effects are included, the impact is higher than table 4.1 indicates. See also chapter 6 on mainland activities and petroleum research.

Total wealth in the petroleum sector

Total wealth in the petroleum sector is calculated as the net present value of estimated future cash flow from this industry. The 1999 revised national planning budget puts the figure at roughly

NOK 1 880 bn in 2000 money at 1 January 2000, with NOK 1 710 bn representing the state's share. A discount rate of four per cent has been applied in the calculation.

Considerable uncertainty attaches to such calculations, which utilise estimates for future prices, exchange rates, inflation rates, production profiles and resources. Choice of discount rate will also influence the outcome.

Government Petroleum Fund

Established by an Act of 1990, the Government Petroleum Fund received its first transfers in 1996 for fiscal 1995.

Its income represents the central government's net cash flow from petroleum activities, as well as the return on fund investments. Expenditures comprise an annual transfer to the Ministry of Finance corresponding to the amount of petroleum revenues applied in the fiscal budget to cover the non-oil deficit.

Capital in the fund acts as a buffer which provides greater room for manoeuvre in economic policy should oil prices or activity in the mainland economy decline, and serves as an instrument for

coping with the financial challenges presented by an ageing population and declining oil revenues.

At 31 December 1999, the fund had accumulated NOK 222.4 billion. This corresponds to 18.7 per cent of gross domestic product. The value of the fund increased by NOK 50.6 billion during 1999.