

Economic Survey

1/91



Economic survey 1990
Norway

Central Bureau of Statistics of Norway

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The current issue of Economic Survey contains a review of the Norwegian economy for 1990. The first preliminary national accounts figures for 1990, based on the quarterly national accounts system, are also presented. The quarterly calculations are carried out on a less detailed level than the annual national accounts. Especially for the last few months of 1990, the calculations are to a large extent based on estimates and reported plans. The cut-off date for information used in the publication was Wednesday, 30. January 1991. The first, preliminary national accounts figures based on data for the year as a whole are scheduled to be published in May this year.

The Economic Survey of 1990 has been prepared by the Research Department in the Central Bureau of Statistics. In the Annual Report 1990 the main fields of research of the Department and some of the projects carried out during the past year are presented.

SUMMARY

The decline in the domestic use of goods and services came to a halt in 1990. Along with a continued high growth in exports through most of 1990, this resulted in a growth of 1.8 per cent in Gross Domestic Product (GDP) from 1989 to 1990. GDP for mainland Norway rose by 1.2 per cent after having fallen the previous two years. Private consumption expanded for the first time since 1987. A sharp growth in household real disposable income is the main reason for this. Gross fixed investment in mainland Norway fell again in 1990, but at a noticeable lower rate than earlier, and towards the end of 1990 there were indications that the decline had come to a halt. Unemployment remained at a very high level after increasing slightly from the previous year. Man-hours worked fell by one per cent from 1989 to 1990, but showed little change through the year.

Inflation in Norway declined further from 1989 to 1990. The consumer price index showed an average rise of 4.1 per cent, a half a percentage point fall from the previous year. With oil prices at about \$20 a barrel from August to December 1990, the rise in consumer prices would on average have been a few tenths of a percentage point lower. Wages increased at a slightly higher rate in 1990 than in 1989. This was expected after wage regulations were removed before the 1990 spring settlement. Developments in 1990 do not indicate that there has been any significant recuperation of real income losses in 1988 and 1989.

The current account showed a surplus of about NOK 26 billion in 1990. Primarily as a result of the

depreciation of the dollar, Norway's total net debt fell by an additional NOK 16 billion, entailing that the net debt as a percentage of GDP fell from 20 per cent in 1989 to some 13 per cent at the end of 1990.

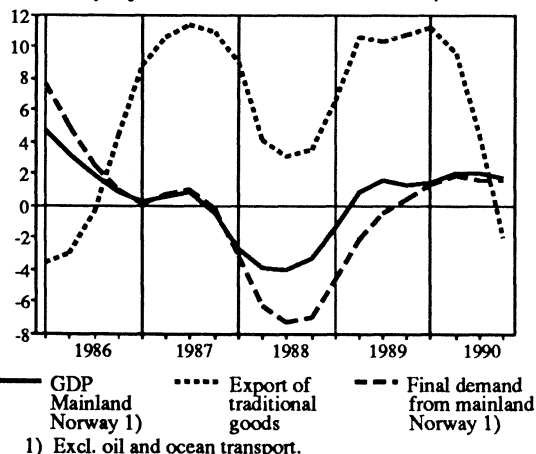
The economic situation through 1990 was marked by a moderate recovery in domestic demand from mainland Norway. Traditional merchandise exports increased briskly at the beginning of the year, but showed a noticeably lower rate of growth through 1990 due to the cyclical downturn abroad. The growth in production through the second half of 1989 continued in 1990 and contributed to halting the decline in employment at the beginning of the year.

MAIN FEATURES OF ECONOMIC DEVELOPMENTS

Growth from previous year. Per cent 1)

	1989	1990
Demand and output volume indicators		
Private consumption	-1.9	3.1
Public consumption	2.5	1.9
Gross fixed investment	-4.8	-26.5
- Mainland Norway	-16.3	-7.4
Final domestic use of goods and services (incl. stocks)	-2.2	-0.2
Exports	10.3	7.2
- traditional goods	5.4	8.6
Imports	0.9	2.2
- traditional goods	-5.1	9.4
Gross Domestic Product	1.2	1.8
- Mainland Norway	-1.2	1.2
Norway's real disposable income	2.0	4.3
Labour-market		
Man-hours worked	-2.9	-1.0
Employed persons	-2.6	-0.6
Unemployment rate (LFS), level	4.9	5.2
Prices and wages		
Consumer Price Index	4.6	4.1
Export prices, traditional goods	6.3	-3.4
Import prices, traditional goods	4.6	1.0
Hourly wages	4.2	4.9
Balance of payments		
Current balance, bill. NOK	2	26

CYCLICAL DEVELOPMENT
(Per cent growth from previous quarter.
Seasonally adjusted and smoothed. Annual rates.)



1) The rates of growth in volume in all the tables with text in the Economic Survey are in constant 1988 prices.

International economy: Cyclical downturn and greater uncertainty

As a result of the war in the Persian Gulf there is now great uncertainty surrounding the international economic outlook. The crisis and increase in oil prices which followed in the wake of Iraq's invasion of Kuwait contributed to amplifying a downward trend in Western industrial economies. The cyclical peak in the OECD area was probably passed early in 1989. Through 1990, economic growth forecasts were sharply reduced for several of the major countries. For the OECD area as a whole, the average annual growth in GNP/GDP in 1990 is estimated at 2 3/4 per cent compared with about 3 1/2 per cent in 1989. In 1991 the growth in GNP/GDP for the OECD area is projected to slow further to about 2 per cent. The forecasts for economic developments in 1991 are based on the assumption that the war in the Middle East will be relatively brief and a crude oil price in the range of \$22-25 a barrel.

In most OECD countries investment demand exhibited the clearest signs of a slower growth rate through 1990. Private consumption also showed a sluggish trend in several countries, and particularly in the U.S. the growth in consumption is now unusually low. In spite of a continued growth in export volumes, total output was declining towards the end of 1990 in both the U.S. and in the UK. A moderate economic recovery is expected to take place in both these countries in the second half of 1991. In Japan, there are signs of slower growth in output and demand following a sustained and strong cyclical upturn. Both in Japan and in the U.S. there is growing uncertainty concerning the strength of financial institutions after major losses, a weakened stock market and a drop in property values.

In Germany, the economic situation is heavily influenced by the unification of the two German states. Fiscal policy has shifted in an expansionary direction as a result of unification and sizeable transfers to Germany (east). This resulted in a rise in the interest rate level in Germany through 1990, a factor which contributed to boosting interest rates in other European countries as well. This may slow investments for some time. The high level of activity in Germany, on the other hand, will stimulate exports from other countries.

The rate of inflation increased slightly through 1990 in major OECD countries like the U.S., Germany (west) and Japan, but declined in the UK towards the end of last year, albeit from a very high level. A projected weak economic growth in the OECD area indicates reduced inflationary pressures in 1991.

When Iraq invaded Kuwait on August 2 last year,

crude oil prices rose rapidly and in September were as high as \$40 a barrel. During the remainder of the year oil prices fluctuated almost "in step with" reports and evaluations linked to this conflict. Crude oil prices were on average about 18 per cent higher in 1990 than in 1989. The Gulf crisis resulted in production losses from Iraq and Kuwait of about 4 million barrels of crude oil a day. This volume, however, was relatively quickly compensated through higher production in other OPEC countries (particularly Saudi Arabia) and from non-OPEC oil producers. At the same time, oil consumption in the OECD showed a downward trend in the second half of 1990.

Following the outbreak of war on January 17 oil prices fell to around \$20 a barrel. Military operations have made the supply situation and price outlook extremely uncertain. Unless there are severe damages to oil installations, there are few indications that oil prices will retain high levels in 1991. With a peaceful solution, the market situation indicates that the price for a period will be well below \$20 a barrel.

Slower rate of growth in Norway's export markets

For traditional merchandise exports, sluggish growth in important trading partner countries like the U.S., UK and Sweden in 1990 resulted in a marked decline in growth in Norway's export markets. For some commodity groups, however, the export markets continued to generate a considerable impetus to growth. A continued deterioration in market growth for important Norwegian export products is likely in 1991. The prices for main groups of Norwegian export goods have shown a weak trend the last two years. Aluminium prices rose markedly last autumn due to expectations of surplus demand in the market, but have later fallen. A resumed rise in prices is not expected until the end of 1991.

Continued strong growth in exports

The total volume of exports expanded by 7.2 per cent from 1989 to 1990. The increase the previous year was some 10 per cent. There was only a moderate growth in exports of crude oil and natural gas from 1989 to 1990, while exports of services grew at approximately the same rate as the previous year. The growth in traditional merchandise exports, however, was as high as 8.6 per cent from 1989 to 1990 compared with 5.4 per cent the previous year. If we exclude exports of refined petroleum products, where growth was some 60 per cent due to the production start of the Mongstad refinery

in the third quarter of 1989, traditional exports showed a growth of 6.1 per cent. This is approximately on a par with the market growth of our trading partners.

The total rise in export prices was about 4 per cent in 1990. Prices for traditional goods, on the other hand, fell by 3.4 per cent. This was primarily due to a decline in prices for goods from export-oriented manufacturing sectors, and in particular metals where prices plummeted as much as 20 per cent on an annual basis. This sharp decline in prices primarily took place last winter.

High growth in private consumption

Total private consumption increased by some 3 per cent from 1989 to 1990. The highest growth was recorded by clothing and footwear, with purchases rising by nearly 12 per cent. A sharp growth in household real disposable income seems to be the main factor underlying the upturn in consumption. Preliminary figures indicate that household real disposable income grew by about 4 per cent from 1989 to 1990. The household savings ratio therefore rose slightly from 1989 and was about zero in 1990 after having been negative since 1985.

Private consumption passed a cyclical turn at the beginning of 1989. Through 1989 and in the first half of 1990 the underlying growth rate for consumption was increasing. In the second half of 1990 the rate of growth seems to have slowed somewhat, but here the preliminary figures are uncertain.

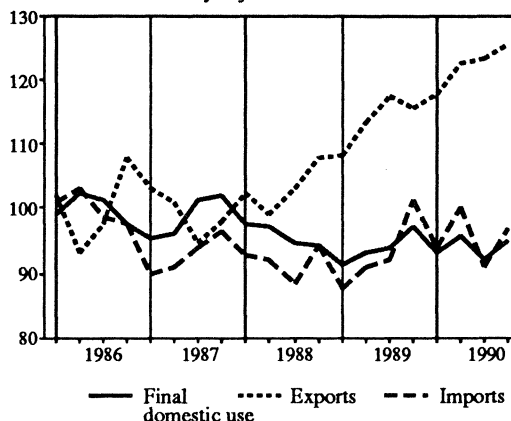
Continued moderate growth in public consumption, but expansionary fiscal policy

According to provisional national accounts figures for 1990, public consumption increased by about 2 per cent from the previous year, or slightly less than in 1989. From 1989 to 1990 central government consumption expanded by about 3 per cent and, as in 1989, it was particularly military spending which boosted the growth. Civilian government consumption increased markedly through 1989, partly as a result of the escalation of labour market measures. Through 1990, on the other hand, civilian central government consumption remained unchanged.

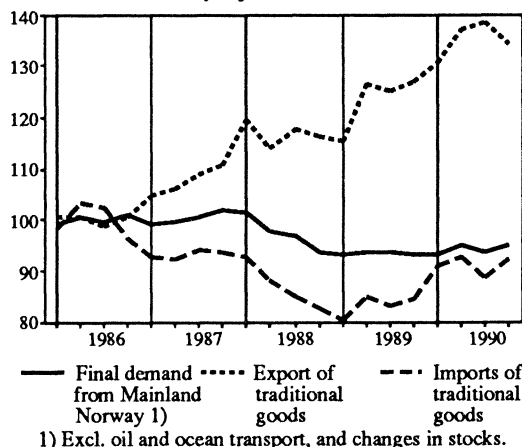
Local government consumption has shown little growth the past two years, but towards the end of 1989 and through 1990 there was a slight increase in the growth rate. Local government consumption grew by some 1 per cent from 1989 to 1990.

Fiscal policy was revised in a clearly expansionary direction in the spring of 1989 and was further expanded in 1990. Transfer payments to the household sector showed a particularly sharp rise.

TOTAL EXPORTS, IMPORTS AND FINAL DOMESTIC USE
1986 = 100. Seasonally adjusted

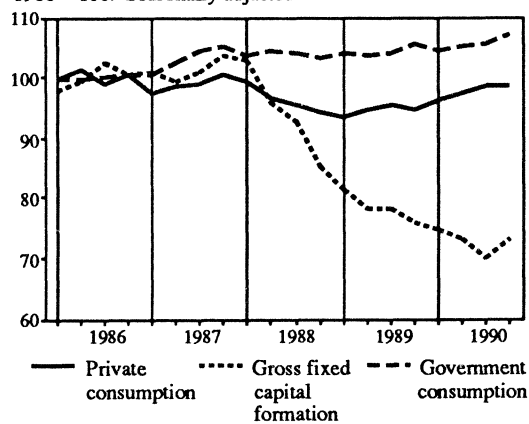


EXPORTS, IMPORTS AND DOMESTIC DEMAND, MAINLAND NORWAY
1986 = 100. Seasonally adjusted



1) Excl. oil and ocean transport, and changes in stocks.

CONSUMPTION AND FIXED CAPITAL FORMATION, MAINLAND NORWAY 1)
1986 = 100. Seasonally adjusted



1) Excl. oil and ocean transport, and changes in stock.

The decline in industry investments is coming to a halt

In 1990 gross fixed investment in mainland Norway was only three fourths of the peak level of 1987. An investment decline of this magnitude during peacetime has not been recorded since the beginning of the 1930s. The reduction in investment was particularly pronounced in 1988, but in 1989 the fall was also substantial. Through 1990, however, the decline in investment levelled off. Caution should be shown, however, in focusing too much on the investment figures for the fourth quarter since they at this time are largely based on preliminary estimates.

The turnaround in investment appeared first in manufacturing industries. In export-oriented manufacturing sectors investment expanded from 1989 to 1990, while it fell slightly for manufacturing as a whole. In the second half of 1990, however, there were definite signs of increased manufacturing investment, and based on the industry's own investment intentions for 1991 the growth will continue in the period ahead. Investment also showed a rise in the power supply sector and for domestic transport. For private services as a whole, the fall in investment came to a halt towards the end of 1989 but showed no clear trend through 1990.

Housing investment, on the other hand, continued to decline sharply and the rate of decline in 1990 was as strong as in 1989. Housing investment fell by about 18 per cent from 1989 to 1990. There are no indications that the decline will level off, but changes in the State Housing Bank's lending quotas and interest terms in 1991, along with some improvement in general economic trends for households, may slow the decline in housing investment in 1991.

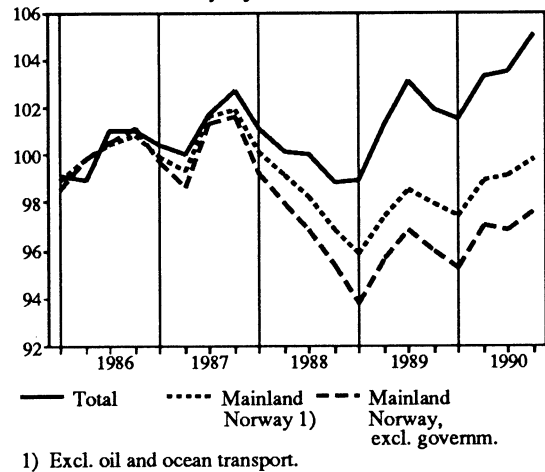
Moderate growth in imports

Total imports grew in volume by some 2 per cent from 1989 to 1990 compared with about 1 per cent the previous year. The growth in traditional merchandise imports, however, was some 9 per cent. Sizeable military procurement and increased investments in cars and aircraft, etc. were an important reason for this growth. The import growth for such non-competing goods was as high as 35 per cent from 1989 to 1990. The recovery in private consumption has also contributed to higher imports of eg. clothing and footwear. The growth in imports of engineering products, excluding ships, was also high, some 11 per cent. Imports of ships, on the other hand, were halved in volume terms from 1989 to 1990.

Clear but moderate growth in output

The gross product for mainland Norway increased

GROSS DOMESTIC PRODUCT
1986 = 100. Seasonally adjusted



by some 1 per cent from 1989 to 1990 after having declined since the autumn of 1987. The resumption of growth started as early as the beginning of 1989 but due to the sharp decline through 1988 GDP for mainland Norway fell on an annual basis from 1988 to 1989. The underlying growth rate was about 2 per cent through 1990. For total GDP the growth the last few years has been higher than for the mainland economy. This was particularly pronounced in 1988 and 1989, while the gap was lower in 1990 due to a moderate growth in oil and gas production.

The growth in gross product in manufacturing and mining continued in 1990 albeit at a very moderate pace. Thus far the expansion has taken place in export-oriented sectors of manufacturing industry. Developments in manufacturing industry through 1990, however, point to a rise in both sheltered and import-competing manufacturing, while export-oriented sectors show signs of weaker developments. This is very closely related to the international economic situation which was discussed above.

In service industries, there was a moderate growth in trade and in transport and communications, a development which is related to the upswing in private consumption. The rate of growth was increasing through 1990.

The gross product in building and construction showed the greatest decline in 1990, as much as 12 per cent from the previous year. The steep decline is related to the substantial and protracted fall in building and construction investment.

Employment decline, but unchanged unemployment

The number of man-hours worked fell by one per cent from 1989 to 1990. The fall in employment on an annual basis was entirely related to a large nega-

tive carry-over into 1990. Through 1990 employment showed some signs of a moderate rise. The number of people employed was reduced by about half a per cent from 1989 to 1990, entailing that the trend towards shorter average working hours per employee has continued. Employment declined in almost all industries with the exception of public administration where the number of man-hours worked increased by 2.5 per cent.

According to the Central Bureau of Statistics' labour market surveys, unemployment rose from 4.9 to 5.2 per cent from 1989 to 1990. The increase in unemployment was held back by a decrease in the supply of labour from 1989 to 1990. Unemployment reached a peak early in 1990 and has since declined slightly, but it is still too early to determine whether the labour market is improving.

Continued low rise in prices and wages

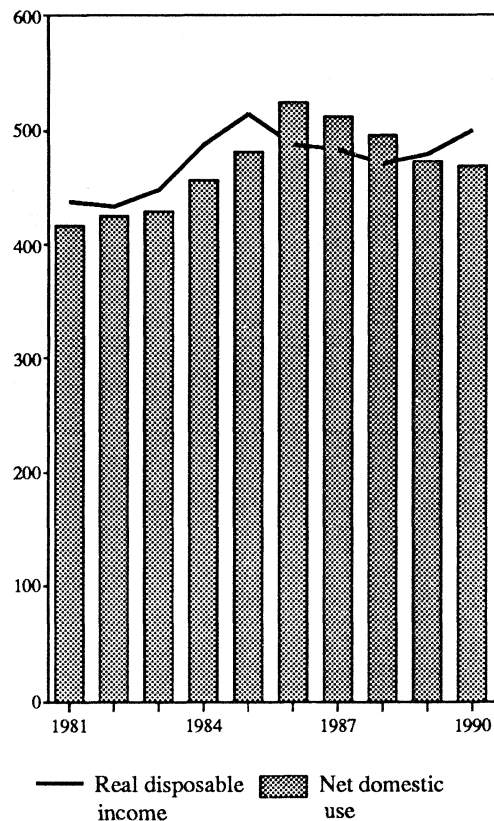
Consumer prices increased by 4.1 per cent from 1989 to 1990 compared with 4.6 per cent the previous year. The rise in prices was slightly higher through 1990 due to the effects of the Gulf crisis on prices; from December 1989 to December 1990 the consumer price index rose by 4.4 per cent. With oil prices at about US\$ 20 a barrel, in line with OPEC's reference price from its July meeting, the consumer price index would have risen a few tenths of a per cent less in 1990, and the December index for 1990 would have been about three quarters of a per cent lower.

The rise in consumer prices in Norway's trading partner countries remains higher than in Norway, and the difference widened through 1990. There is reason to assume, however, that the gap will narrow considerably through 1991 because inflation rates in the UK and Sweden are expected to fall substantially through 1991.

The low rate of inflation in Norway continued in spite of the fact that the growth in wages from 1989 to 1990 was about 5 per cent. The growth in labour productivity, however, was also high. Industries in mainland Norway posted productivity gains of 3.5 per cent from 1989 to 1990 entailing that unit labour costs rose about 1.5 per cent. Firms therefore registered an increase in profit margins in 1990. The rise in import prices is still moderate and is helping to curb the inflation rate.

For the first time since 1987 the wage settlements in the spring of 1990 were carried out without statutory regulations. There was therefore some uncertainty as to how high the growth in wages would be. The settlements generally allowed for a pay rise of slightly more than 4 per cent and included an escalator clause which would trigger new wage negotiations if the year-on-year rise in consu-

REAL DISPOSABLE INCOME FOR NORWAY AND DOMESTIC USE OF GOODS AND SERVICES
Billion 1988-kroner



The Gross Domestic Product less capital consumption provides an indication of the net income that is created in Norway in the course of a year. By deducting net interest, dividends and transfers abroad, we arrive at the income that can be used for consumption and saving. By adjusting for price rises, we can measure how real disposable income has developed over time. In the diagram the development in Norway's disposable income for the period 1981-1990 is shown along with the development in the net domestic use of goods and services which is the sum of private and public consumption and net fixed investment. The difference corresponds to the balance of the current account.

mer prices exceeded 4.2 per cent in November 1990. Due to unexpectedly high oil prices, the rise in prices was 4.5 per cent in November, and negotiations on compensation were carried out.

If the growth in wages from 1989 to 1990 is evaluated on the basis of historical experience with regard to factors which determine the growth in

wages, it may be concluded that so far there has not been any significant degree of wage catch-up following the lower growth in wages as a result of regulations in force in 1988 and 1989.

Improvement in the balance of payments

According to preliminary calculations, the current account showed a surplus of some NOK 26 billion in 1990 compared with about NOK 2 billion in 1989. About NOK 15 billion of the surplus in 1990 can be ascribed to unexpectedly high oil prices measured in dollars (i.e. in relation to oil prices of \$20 a barrel from August to December 1990). The improvement is also due to a moderate growth in the total value of imports, while export growth remained high. A substantial reduction in imports

of ships also contributed to the improvement in the current account.

Norway's net foreign debt was reduced by NOK 42 billion through 1990 and corresponded to 13 per cent of GDP compared with some 20 per cent the previous year.

High growth in Norway's real disposable income

Norway's real disposable income expanded by some 4 per cent from 1989 to 1990. The contributions from higher production and an improvement in the terms of trade were both about 2 per cent. However, Norway's real disposable income is still lower than in 1985, i.e. prior to the fall in oil prices.

DEVELOPMENT TRENDS IN SELECTED MACROECONOMIC VARIABLES

Percentage change in volume in 1988 prices ¹⁾

	NOK billion	Growth from same period previous year				Underlying tendency Annual rate (measured from previous quarter) ⁵⁾			
		1990	90.1	90.2	90.3	90.4 ⁶⁾	90.1	90.2	90.3	90.4^{6)}
Private final consumption expenditure	312.3	3.5	2.2	3.1	3.7	4	4	3	1
Goods	198.2	3.3	2.0	3.5	4.2	5	5	4	1
Services	104.3	4.1	2.4	1.7	2.5	3	2	2	2
Norwegian consumption abroad	19.2	-2.8	3.8	2.4	3.0	*	*	*	*
- Non-residents' consumption	9.4	-6.3	1.8	-2.8	1.7	*	*	*	*
Government final consumption	127.7	0.5	3.7	1.7	1.5	*	*	*	*
Central government	50.8	0.5	7.2	2.3	1.1	*	*	*	*
Civilian	30.6	2.4	6.4	1.2	-1.9	*	*	*	*
Military	20.2	-3.2	8.6	4.2	4.5	*	*	*	*
Local government	76.9	0.5	1.4	1.3	1.8	*	*	*	*
Gross fixed capital formation	118.5	-7.5	-34.9	-31.2	-26.5	*	*	*	*
Oil and shipping	22.3	-9.7	-68.6	-69.0	-61.9	*	*	*	*
Mainland Norway	96.3	-7.0	-8.5	-10.6	-3.9	-8	-7	-4	2
Manufacturing and mining	14.5	-12.7	-10.7	-8.2	6.0	-6	-1	4	8
Production of other goods	13.0	-14.9	-11.0	-12.8	-2.1	-12	-8	-2	7
Other services	68.7	-4.6	-7.6	-10.6	-6.5	-7	-8	-6	-1
Stocks (contribution to GDP growth)	14.5	(2.5)	(9.8)	(5.0)	2.9	*	*	*	*
Ships and oil platforms in progress (contribution to GDP growth)	10.3	(-0.5)	(6.8)	(2.5)	1.8	*	*	*	*
Other stocks (contribution to GDP growth) ³⁾	4.2	(3.0)	(3.0)	(2.5)	1.1	*	*	*	*
Final domestic use of goods and services	573.0	2.9	0.8	-1.5	-2.7	-1	-1	-1	1
- gross capital formation in oil and shipping (incl. stocks) ²⁾	32.6	-12.4	-29.9	-47.9	-49.2	*	*	*	*
- demand from mainland Norway	536.3	0.7	0.5	0.1	1.7	1	2	2	2
Exports	252.8	9.6	6.3	5.0	8.0	8	8	7	5
Traditional goods	112.1	14.7	5.1	10.8	4.6	11	10	4	-2
Crude oil and natural gas	61.5	0.6	-2.7	-4.3	9.9	-4	1	10	18
Ships and oil platforms	9.1	37.6	160.5	12.4	60.1	*	*	*	*
Services	70.2	8.2	5.8	4.2	7.5	6	6	7	7
Total use of goods and services	825.8	4.9	2.4	0.4	0.3	2	2	1	3
Imports	224.9	8.8	7.7	-1.4	-4.8	2	-1	-3	1
Traditional goods	142.8	15.2	6.2	6.3	8.4	12	8	4	3
Crude oil	1.1	69.0	183.3	90.6	135.0	*	*	*	*
Ships and oil platforms	13.8	-24.7	22.0	-60.9	-63.7	*	*	*	*
Services	67.2	4.2	5.4	2.1	1.8	4	4	2	3
Gross domestic product (GDP)	600.9	3.5	0.5	1.1	2.4	2	3	3	3
- Mainland Norway	521.3	2.7	-0.1	1.3	1.1	1	2	2	2
Oil activities and shipping	79.7	9.1	4.5	-0.2	10.7	3	6	9	12
Mainland industry	479.3	2.3	-0.8	1.4	0.8	1	2	2	2
Manufacturing and mining	91.2	3.0	-3.3	1.7	-0.0	1	2	3	2
Production of other goods	73.8	0.2	-2.4	1.7	-3.8	-2	-1	-2	-4
Other services	314.3	2.5	0.2	1.2	2.2	2	2	3	3
Correction items (contribution to GDP growth) ⁴⁾	41.9	(0.5)	(0.5)	0.0	0.4	*	*	*	*

¹⁾ See "Technical comment".

PRICE INDICES FOR SELECTED MACROECONOMIC VARIABLES

	Percentage change from the same period the year before				Underlying tendency annual rate (measured from previous quarter)			
	90.1	90.2	90.3	90.4 ⁶⁾	90.1	90.2	90.3	90.4 ⁶⁾
Private final consumption expenditure	4.3	3.9	4.2	4.5	4	5	5	4
Government final consumption expenditure	4.6	3.5	3.9	5.0	3	5	5	8
Gross fixed capital formation	2.4	1.5	1.3	-0.6	3	-8	19	-13
- Mainland Norway	1.9	0.6	1.8	1.2	-1	0	7	-1
Final domestic use of goods and services	3.5	2.9	3.3	3.2	3	2	8	1
- demand from mainland Norway	3.9	3.3	3.8	4.0	3	4	5	4
Exports	3.7	-5.0	2.4	14.3	-1	-16	28	56
- traditional merchandise exports	-4.0	-6.8	-5.6	2.8	-8	-8	0	30
Total use of goods and services	3.7	0.4	3.1	6.8	2	-4	14	17
Imports	3.0	1.6	-0.2	-1.0	-1	-2	0	2
- traditional merchandise imports	2.1	0.8	0.1	0.2	-1	-1	3	-2
Gross domestic products (GDP)	3.9	0.0	4.3	9.9	3	-5	20	22
- excl. oil and shipping	1.8	1.4	2.1	3.4	2	2	4	6

TECHNICAL COMMENT ON THE QUARTERLY ACCOUNTS FIGURES

Footnotes: 2) Including ships, oil platforms and platform modules in progress. 3) Excluding ships, oil platforms and platform modules in progress. Contributions to GDP growth are calculated as the difference between investments in stocks in the quarter and the same quarter the previous year, calculated as a percentage of GDP the same quarter the previous year. 4) Corrected for free bank services and certain excises. The contributions to GDP growth are calculated as the increase in the item from the same quarter the previous year, measured as a percentage of GDP the same quarter the previous year. 5) Growth from previous quarter in smooth, seasonally adjusted series, converted to an annual rate. 6) Estimates partly based on projections. *) Percentage changes are meaningless.

Quarterly calculations: The calculations are made on a less-detailed level than the calculations for the annual national accounts, and are based on a simpler procedure. The quarterly national accounts figures for the years up to and including 1988 have been reconciled against the most recently published annual accounts figures.

Gross fixed capital formation: Total gross fixed capital formation is heavily influenced by significant fluctuations in investment in oil activities. These fluctuations are inter alia due to the fact that platforms that have been under construction for several years are counted as investment in the quarter and with the capital value they have at the time they are towed out to the field.

Seasonally-adjusted figures: The quarterly national accounts are not seasonally-adjusted, as these accounts are attempts to register the actual transactions that have taken place in each quarter. Many of the statistical series thus show clear seasonal variations. These are therefore seasonally adjusted on the detailed accounts level and then added together with the other statistical series to obtain the total figures presented in the tables and charts. Seasonal adjustments for the central government sector's purchase of goods and services are based on estimates, as there is not enough information available yet to map out the seasonal pattern.

Underlying trend: The Norwegian economy is so small that random or single important occurrences can give wide variations in the figures. The seasonally adjusted figures are therefore smoothed so that it is possible to find the underlying trend for each series. Smoothing is an attempt to distinguish between random and systematic variations in the series.

REVISIONS OF UNDERLYING TREND

Per cent growth from previous quarter. Seasonally adjusted and smoothed. Annual rates

Publ.	87.1	87.2	87.3	87.4	88.1	88.2	88.3	88.4	89.1	89.2	89.3	89.4	90.1	90.2	90.3	90.4
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GDP Mainland Norway

Nov.-87	-1	0	1													
Jan. - 88	-1	1	2	2												
June -88	0	0	1	0	-2											
Sept.-88	-1	0	0	0	-1	-1										
Dec.- 88	-1	0	1	1	0	-1	-2									
Feb.- 89	-1	0	1	1	0	-1	-1	-2								
June -89	1	2	2	2	0	-2	-3	-4	-3							
Sept.-89	1	2	2	2	-1	-2	-4	-4	-2	1						
Dec.- 89	1	2	2	2	0	-2	-4	-4	-2	1	3					
Feb.- 90	1	2	2	2	0	-2	-3	-3	-1	2	3	2				
June -90	0	1	1	-1	-3	-4	-4	-3	-1	1	1	0	-2			
Sept.-90	0	1	1	-1	-3	-4	-4	-3	-2	1	1	1	1	3		
Dec.-90	0	1	1	-1	-3	-4	-4	-3	-2	1	1	1	2	3	3	
Feb.-91	0	1	1	-1	-3	-4	-4	-3	-1	1	2	1	1	2	2	2

Final demand from Mainland Norway

Nov.-87	-2	-2	-2													
Jan. - 88	-1	-1	0	1												
June -88	-1	0	1	1	-2											
Sept.-88	-1	0	0	0	-2	-4										
Dec.- 88	-1	0	0	0	-2	-4	-4									
Feb.- 89	-1	0	0	0	-3	-5	-4	-3								
June -89	0	1	1	0	-3	-5	-5	-4	-3							
Sept.-89	0	1	1	0	-3	-6	-7	-6	-4	0						
Dec.- 89	0	1	1	0	-3	-5	-6	-6	-5	-2	0					
Feb.- 90	0	1	1	0	-3	-5	-6	-6	-4	-2	0	1				
June -90	0	1	1	0	-3	-6	-7	-7	-4	-2	-1	-1	-1			
Sept.-90	0	1	1	0	-3	-6	-7	-7	-5	-2	0	1	2	3		
Dec.-90	0	1	1	0	-3	-6	-7	-7	-5	-2	-1	0	1	2	2	
Feb.-91	0	1	1	0	-3	-6	-7	-7	-5	-2	0	1	1	2	2	2

COMMENTS ON THE REVISIONS

Revisions can either be due to new/revised quarterly figures for the current year, new/revised annual national accounts figures for previous years, or a change to a new base year for prices. Because the growth rates following the change-over to an annual rate are rounded off to the nearest whole per cent, a 1 percentage point change in the growth rate can be due to different rounding.

Published:	Price basis:	New annual accounts:	Other comments:
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Nov.-87	1986		
Jan. - 88	"		
June -88	"	1985-87	New seasonal adjustment programme used
Sept.-88	"		
Dec.- 88	"		
Feb.- 89	"		
June -89	1987	1986-87	
Sept.-89	"		Revised seasonal adjustment programme
Dec.- 89	"		
Feb.- 90	"		
June -90	1988	1987-88	
Sept.-90	"		
Dec.-90	"		
Feb.-91	"		

ECONOMIC POLICY

Fiscal policy

Fiscal policy in 1990 was noticeably more expansionary than in the previous year, with an oil-adjusted deficit of NOK 42.9 billion compared with NOK 21 billion in 1989. The total central government budget deficit was nevertheless smaller than expected due to higher oil revenues.

In the government budget for 1990 the Brundtland Government planned on a deficit before loan transactions of NOK 9.7 billion. Adjusted for oil taxes, income from state petroleum activities and transfers from the Bank of Norway, the deficit was estimated at NOK 38.4 billion. Following the

change in Government, the non-socialist coalition Government presented a revised budget proposal with a deficit of NOK 6.7 and 35.5 billion respectively.

The Brundtland Government proposed a relief in personal taxes of NOK 2.25 billion. The proposals called for a reduction of NOK 1.5 billion in the investment tax and an increase of NOK 0.8 billion in special excise duties to promote the environmental and health policy. The new coalition Government proposed no changes in the plans for lower investment taxes and higher environmental taxes, etc, but did table proposals for a total relief in personal taxes of NOK 3.3 billion.

REVENUE AND EXPENDITURE ON CENTRAL GOVERNMENT ACCOUNTS, INCLUDING SOCIAL SECURITY

	1989	1990		% change from 1989 to 1990 Accounts
	Accounts NOK bill.	Budget NOK bill.1)	Accounts NOK bill.2)	
Total revenue	281.4	297.1	299.2	6.3
Taxes, royalties and other revenue from petroleum activities	23.9	30.1	36.1	51.1
Transfers from Bank of Norway	7.5	10.2	10.2	36.0
Total revenue excl. oil revenue and transfers from Bank of Norway	250.0	256.9	252.8	1.1
Other taxes and excise duties	188.6	195.0	192.9	2.3
- Direct taxes, incl. National Insurance and pension premiums	95.5	95.3	(94.9)	(-0.6)
- Indirect taxes	93.1	99.7	(98.0)	(5.3)
Other revenue incl. interest income and transfers	61.5	61.9	59.9	-2.6
Total expenditure	280.3	305.7	302.2	7.8
- Expenditure for state petroleum activities	9.3	10.0	6.5	-30.0
- Total expenditure excl. oil activities	271.0	295.7	295.7	9.1
Expenditure on goods and services	71.2	75.9	74.0	3.9
Transfers	199.9	219.8	221.8	11.0
- To local government sector incl. contributions to Tax Equalization Fund	41.6	43.8	44.7	7.5
- Other transfers	158.3	175.9	177.0	11.8
Surplus before loan transactions	1.1	-8.6	-3.0	
Surplus before loan transactions adjusted for oil taxes, transfers from Bank of Norway and state petroleum activities	-21.0	-38.8	-42.9	

1) Budget reports s. III (1990-91).

2) Final Budget Bill for 1991 budget.

() Preliminary estimates from the National Budget.

In the final budget the balance was weakened in relation to the Syse Government's proposal. Excluding net oil receipts, revenue was reduced by NOK 0.9 billion, while expenditure was raised by NOK 1.8 billion, a total reduction of NOK 2.7 billion in the budget balance. Of this amount, NOK 0.2 billion related to changes resulting from supplementary proposals by the Government and the Parliament's budget debate, while the remainder was due to revised revenue estimates and accounting changes in the government budget. The deterioration in the budget balance when oil revenue and expenditure are included was less, NOK 1.7 billion, as a result of higher estimates for net oil revenue.

Viewed in relation to the government accounts for 1989, the approved budget for 1990 showed a growth in total revenue of NOK 5.6 per cent or 1.1 per cent adjusted for oil revenue and transfers from the Bank of Norway. The estimate for revenue from petroleum activities showed a rise of 26 per cent, and transfers from the Bank of Norway were increased by 36 per cent. Taxes and excise duties, excluding petroleum production, showed small changes. Budget expenditure showed a total growth of 9.1 per cent. The increase was largely due to a rise in transfers, but this was partly related to accounting changes for the Norwegian State Railways.

During the spring the budget deficit, adjusted for oil revenue and transfers from the Bank of Norway, increased further. The budget deficit, when oil re-

venue and expenditure are included was approximately unchanged. In the Revised National Budget, estimated revenue, excluding oil receipts, was reduced by NOK 1.3 billion primarily as a result of lower estimates for VAT and investment taxes. Moreover, local government contributions to the National Insurance Scheme was reduced. The government budget's net revenue from oil activities was estimated to be NOK 2.2 billion higher than in the approved budget. Expenditure was raised by about NOK 2 billion. The spending growth was due to higher estimates for allocations from the National Insurance Scheme and higher expenditure for labour market measures. In addition, NOK 1 billion was allocated for improving the care of the elderly. The magnitude of transfers from 1989 to 1990 has been exceptionally high, NOK 7.6 billion. This particularly applies to appropriations for labour market measures where there was a transfer of NOK 1.6 billion in funds released from the contingency plan. The sizeable transfer to 1990 must therefore be viewed in light of the sharp escalation of labour market measures in 1989. Adjusted for net transfers from 1989, the estimates in the Revised National Budget show a spending shortfall of NOK 1.7 billion.

New figures for the 1990 accounts show a further increase in the oil-adjusted deficit compared with the Revised National Budget, while the deficit including net oil revenue and transfers from the Bank of Norway shows a sizeable decline due to consid-

FISCAL AND CREDIT POLICY INDICATORS 1988-1990

	1988	1989	1990
Surplus before loan transactions adjusted for oil activities, etc. as % of GDP excl. oil activities and shipping	-0.5	-3.9	-7.7
Change from previous year (percentage points)	-0.6	-3.4	-3.0
Surplus before loan transactions adjusted for oil activities and cyclical factors, etc. as % of cyclically-adjusted GDP excl. oil activities and shipping	-2.7	-5.0	-7.2
Change from previous year (percentage points)	0.6	-2.3	-2.2
Central government and social security expenditure on goods and services as % of GDP excl. oil activities and shipping	12.5	13.3	13.3
Percentage growth in money supply in October from October the previous year	10.6	6.7	5.2
Domestic sources ¹⁾	15.7	1.7	8.4
Public's foreign currency sales to banks ¹⁾	-5.0	5.4	-3.1

1) The domestic supply is calculated excluding central government loans/contributions to petroleum activities and the banks' lending based on foreign exchange licences, etc. These items are included under the public's foreign currency sales to the banks.

erably higher than projected oil revenue. Tax revenue, excluding the oil sector, has been slightly lower than budgeted. The increase in the oil-adjusted deficit is primarily due to a lower estimate for excise revenue as a result of lower than expected car sales. In addition, NOK 0.8 billion was allocated to Norsk Jern Holding A/S to cover the company's debt to the central government.

Compared with the accounts for 1989, expenditure increased in 1990 by NOK 21.9 billion, or 7.8 per cent. The spending growth was particularly due to higher transfers (11 per cent), while expenditure on goods and services only rose by 3.9 per cent, i.e. approximately zero growth in real terms. Revenue, excluding oil receipts, grew by NOK 2.8 billion, or 1.1 per cent, while oil revenue and transfers from the Bank of Norway increased by NOK 14.9 billion, or 47.5 per cent.

Fiscal policy indicators

The use of fiscal and credit policy indicators can be useful as summary measures of the effects of fiscal and credit policy. There will not, however, be any clear-cut relationship between these indicators and developments in the economy. A given fiscal policy and credit programme will have different effects on key variables in the economy such as employment, price developments and the balance of payments, depending on such factors as capacity utilization, the tightness of the labour market and the cyclical situation in countries with which we trade. To some extent it is possible to adjust the indicators for such factors. The question of which criteria should be used, will nevertheless have to be based on judgement. Activity-adjusted indicators will therefore basically only be able to indicate whether the policy has been revised in an expansionary or restrictive direction. A more complete analysis of the effects of economic policy will require a far more specified description of fiscal and credit policy instruments as well as the use of macroeconomic models.

The most widely used indicators for the stance of economic policy are:

- Oil-adjusted surplus before loan transactions on the central government and social security budget. This is defined as the surplus before loan transactions adjusted for oil taxes, transfers from the Bank of Norway and net revenue from state petroleum activities.
- Oil- and activity-adjusted surplus before loan transactions on the central government and social security budget. This is defined as the oil-adjusted surplus also adjusted for cyclical factors and the central government's net interest payments to the Bank of Norway and abroad.

-Central government sector's expenditure on goods and services.

-Money supply growth by sources of supply.

In order to make the indicators less dependent on price developments and easier to compare over time, they are usually computed as percentages of GDP (excluding oil and shipping).

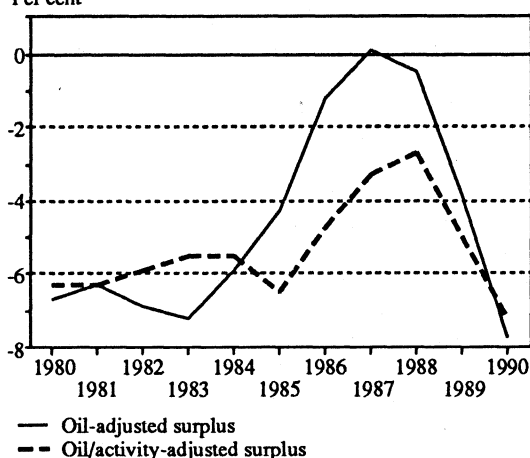
It is necessary to consider the various indicators together. The composition and level of central government expenditure will have a bearing on how expansionary a given budget deficit is. The effect of the deficit on the domestic credit supply will also have to be evaluated when examining how fiscal policy affects the rest of the economy.

Surplus before loan transactions

The level of the surplus on the central government and social security budget will be a measure of the direct "net" effect of the budget on demand. The change in this surplus from the previous year's budget thus gives an indication of whether the budget has become more or less expansionary. Adjustments are made for oil taxes, state petroleum activities and transfers from the Bank of Norway because these items are assumed to be of little significance for the development in domestic demand.

The oil-adjusted surplus is not entirely a result of political decisions, but will to a large extent be influenced by cyclical conditions. In order to obtain an indicator which gives a better indication of how expansionary fiscal policy is, the Ministry of Finance therefore computes an oil- and activity-adjusted surplus. This indicator is also adjusted for the central government's net interest payments to the Bank of Norway and abroad and for cyclical components in some revenue and expenditure. The indicator is measured as a percentage of an estimated cyclically-adjusted GDP for mainland Norway.

SURPLUS AS SHARE OF GDP EXCL. OIL AND OCEAN TRANSPORT
Per cent



The oil-adjusted surplus on the central government and social security budget fell from about NOK -21 billion in 1989 to NOK -43 billion in 1990. As a percentage of mainland Norway's GDP, the surplus fell by 3.8 percentage points. When also adjusted for the level of activity and interest payments, the surplus as a percentage of a cyclically-adjusted GDP for mainland Norway fell by 2.2 percentage points. Measured in this way, the increase in the demand stimulus from the 1990 budget is approximately on a par with the increase in the demand stimulus in 1989.

In the activity-adjusted surplus, the cyclical effects on revenue are calculated for a number of taxes and excise duties. But there will not be any clear-cut relationship between developments in the real economy, as this appears in the national accounts and estimates in the National Budgets, and tax revenue for the central government and social security sector. It is therefore uncertain to what extent the activity-adjusted indicator succeeds in picking up such strong cyclical fluctuations as experienced in the Norwegian economy in recent years.

When calculating the activity-adjusted indicator, an adjustment is made for cyclical effects on expenditure for unemployment benefits but not for appropriations for labour market measures. A greater use of such measures will thereby result in a lower activity-adjusted surplus. Even though expenditure on labour market measures does not automatically follow cyclical movements, but requires actual resolutions, it must be said that cyclical conditions are of decisive importance in adopting such measures. Disbursements for the "Work for your Benefit" scheme, which is part of the labour market measures, will also to a large extent replace payments of unemployment benefits.

For a number of other types of benefits as well there will be a close relationship between cyclical developments and expenditure on transfers. The strong growth in these transfers in 1989 and 1990 was largely related to higher unemployment. No adjustment has been made for the cyclical effects in this expenditure in the activity-adjusted budget deficit.

Expenditure on goods and services

Changes in the central government and social security sector's outlays on goods and services as a percentage of mainland Norway's GDP may also provide indications of changes in fiscal policy. This indicator was approximately unchanged from 1989 to 1990. As noted, the composition of goods and services will be of significance in how the rest of the economy is influenced by this expenditure.

The growth in the money supply

The growth in the money supply is widely used as an indicator of how economic policy affects the development of the economy in nominal terms. It should be emphasized, however, that the relationship between money supply growth and the growth in nominal GDP is uncertain. The supply of liquidity to the public (private sector and municipalities, etc.) can be broken down by source. A rough breakdown is obtained by distinguishing between the domestic liquidity supply and the public's net sales of foreign currency to private banks. The domestic liquidity supply consists partly of items over which the authorities have direct control and partly items which can be influenced through fiscal and credit policy. The public's foreign currency sales to the banks will also depend on the cyclical situation and on the authorities' regulation of capital movements.

Money supply growth from October 1989 to October 1990 was 5.2 per cent, while the growth in nominal GDP was 6.7 per cent. The contribution from domestic sources has risen from 1.7 per cent from October 1988 to October 1989 to about 8.4 per cent from October 1989 to October 1990.

Summary

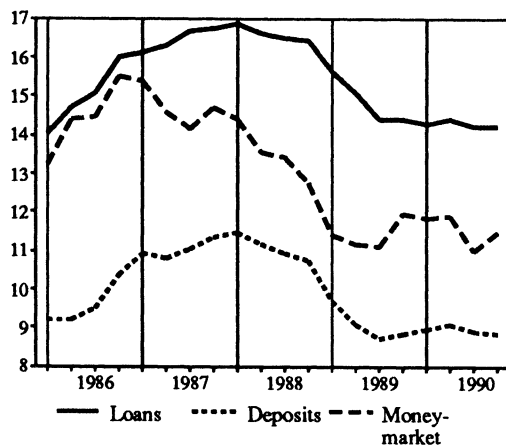
Viewed as a whole, fiscal and credit policy indicators give the impression that the revision of economic policy in an expansionary direction in 1989 continued in 1990.

Credit and exchange rate policy

Since the mid-1980s Norway's credit and exchange rate policy has changed substantially. The last remaining direct regulations of the financial institutions were lifted in 1989 and the magnitude of exchange controls is being constantly reduced. As from July 1, 1990 residents were given expanded opportunities to deal in foreign bonds and certificates, household were allowed to borrow in foreign currencies, and the licence requirement for direct investment abroad was abolished. In line with this liberalization, both the financial institutions and Norway's monetary and credit policy have had to gradually shift from being regulation-oriented to being market-oriented. Since the devaluation in 1986 the prime target of monetary and credit policy has in practice been achieving balance in the foreign exchange market.

With effect from October 22, 1990 the Norwegian krone (NOK) has been linked to the European Currency Unit (ECU). Technically, this entails a change from a geometric to an arithmetic exchange rate index and a change in the weights of the index. In the foreign exchange market this will probably

AVERAGE RATE OF INTEREST ON BANK LOANS AND DEPOSITS



Source: Bank of Norway.

have two effects. On the one hand, it is possible that the ECU link-up helps to strengthen market players' confidence that Norway will actually pursue a fixed exchange rate policy. If this is the case, it will contribute to a lower interest rate differential vis-a-vis other countries in the period ahead compared with what we otherwise would have experienced.

On the other hand, the ECU link-up entails that the weights in the currency basket have become less representative for the composition of our trade. If, as a result of a lower rise in costs in member countries, the ECU continues to strengthen against a weighted average of the currencies of our trading partners, Norway must in the period ahead have a lower rise in costs than our trading partners in order to maintain manufacturing industry's competitive position.

When monetary and credit policy is based on market-oriented instruments, it is not possible to pursue detailed objectives for the distribution of the credit supply, except for the state banks. In line with this, the detailed credit budget in the National Budget has since 1988 been replaced by an interval for growth through the year in total credit from domestic sources to the private sector and municipalities. For 1990 this interval was set at 5-9 per cent, corresponding to a growth of between NOK 40 and 75 billion in the public's gross indebtedness to domestic lenders. Figures through September 1990 indicate that the growth for 1990 will be close to the lower limit in the interval.

Parallel to the removal of direct regulation of the credit market, interest rate policy has become the most important element in monetary and credit policy. Through the last few years interest rate policy has been adapted to the goal of maintaining a stable exchange rate. In practice the Bank of Norway uses foreign exchange interventions to neutralize small changes in other sectors' net de-

mand for NOK. If the interventions do not add up to approximately zero over a suitable period, it is possible to counter imbalances in the foreign exchange market by changing the money market rate. The Bank of Norway can achieve this by changing the interest rate or other terms linked to the banks' borrowing facilities in the central bank, or through market operations. There is reason to believe that it is easier for the Bank of Norway to live with a net foreign exchange inflow for a period than with a net outflow of foreign exchange.

The interest rate on the banks' overnight loans in the Bank of Norway was changed on six occasions in 1989. Following five reductions of half a percentage point each, the rate was raised by one percentage point to 11 per cent in November 1989. The overnight rate was kept at this level until the end of August 1990. The money market rate represented by the three-month interbank rate moved during this period from a level of 12 per cent in January down to 11.1 per cent in July and August. Against this background, and in view of some net sales of NOK in the first eight months of 1990, the overnight rate was reduced to 10.5 per cent on August 27. In September, the money market rate fell further to 10.8 per cent, thereafter rising slightly during the last three months of the year. At the end of the year the money market rate was about 0.8 percentage points below the December 1989 level, but only 0.3 percentage points below the level of January 1990. The interest rate disparity between Norway and other countries widened during the last three months of the year, without this resulting in any significant increase in foreign currency inflows. The view that the link-up with the ECU would result in a fall in interest rates via a lower premium for NOK thus does not appear to have gained acceptance in the market in 1990.

Interest rates in money and capital markets fell substantially through 1987 and 1988. Nevertheless it was not until 1989 that the reduction in the general interest rate level had a definite impact on bank rates. Following a reduction of some 0.3 percentage points through 1988, the average interest rate for commercial and savings bank lending fell by some 1 percentage point from the fourth quarter of 1988 to the third quarter of 1989. Since then, however, the banks' lending rates have shown little change, entailing that the interest rate level in the third quarter of 1990 was only 0.2 percentage points lower than the level in the third quarter of 1989. Interest rate observations for the fourth quarter of 1990 are not yet available.

The average interest rate for the public's deposits with private banks declined from 10.7 per cent in the fourth quarter of 1988 to 8.8 per cent in the fourth quarter of 1989. Since then deposit rates have

moved slightly in both directions, and in the third quarter of 1990 were about 8.9 per cent. The small movements in lending and deposit rates resulted in a slight reduction in the banks' interest margin from the fourth quarter of 1989 to the third quarter of 1990.

Since 1987 the banks' deposits from the public have amounted to about 85 per cent of the banks' lending to the public. The interest rate on the rest of the banks' funding is primarily based on money market terms. The reduction in the money market rate from the fourth quarter of 1987 to the third quarter of 1989 must, under these circumstances, have contributed to a decline in the banks' total finance costs. The fact that the interest margin did not exhibit a downward trend during this period is probably related to the pronounced increase in the banks' losses. In such an event the banks' losses have to some extent been passed on to the banks' customers. It now appears that the losses in 1990 have increased further from the high level recorded in 1989. Along with an increase in interest rates in the money market in the fourth quarter of 1990, this probably indicates that we will gradually register an increase in both bank rates and in the banks' interest margin.

Interest rate levels in Norway and abroad

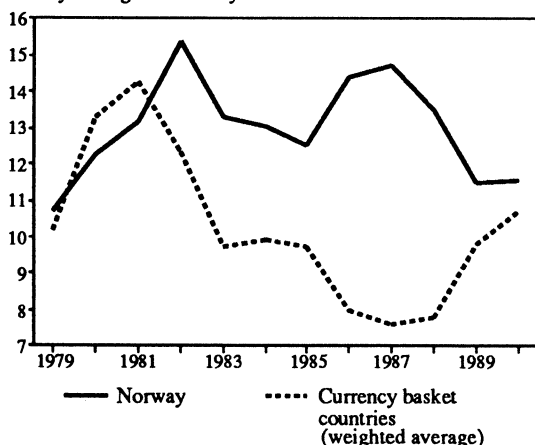
The possibilities for capital movements between Norway and other countries entail that both the nominal interest rate level abroad and market players' expectations concerning exchange rate changes for NOK are of importance to the interest rate level in Norway. A high nominal interest rate level abroad compared with the level in Norway or expectations that the NOK will depreciate will, in isolation, mean that market players will have a

tendency to borrow in Norway, sell NOK for foreign currencies and place funds abroad. As long as the Bank of Norway adds liquidity to the Norwegian money market, the interest rate level in Norway does not have to rise, but such a policy will either result in a depreciation of NOK or a drain of foreign exchange reserves. If the Bank of Norway does not supply liquidity to the market, the interest rate level in Norway will rise. For a given deviation between the expected return on NOK and foreign currency placements, the pressure on foreign exchange reserves will be greater the more similar Norwegian and foreign financial instruments are. If investors consider Norwegian and foreign financial instruments to be very similar, the freedom for manoeuvre in interest rate policy in Norway will be negligible.

Through the years 1982 to 1985 the nominal interest rate level in the Norwegian money market was 3 to 3 1/2 percentage points higher than the interest rate level abroad represented by the difference from rate index (basket rate). When oil prices began to fall in the autumn of 1985, the interest rate differential widened substantially. Measured as an annual average, the interest rate exchange parity rose from about 2.8 per cent in 1985 to about 6.4 per cent in 1986 and 7.1 per cent in 1987. In 1988, the interest rate differential fell to 5.7 per cent, and further to about 1.7 per cent in 1989. In 1990, the average interest rate differential between Norway and those countries represented in the Norwegian exchange rate index was reduced to 0.9 per cent. It seems natural to interpret the development in the interest rate differential in the years after 1985 primarily as a result of changes in market players' views on the uncertainty about future exchange rate movements for NOK.

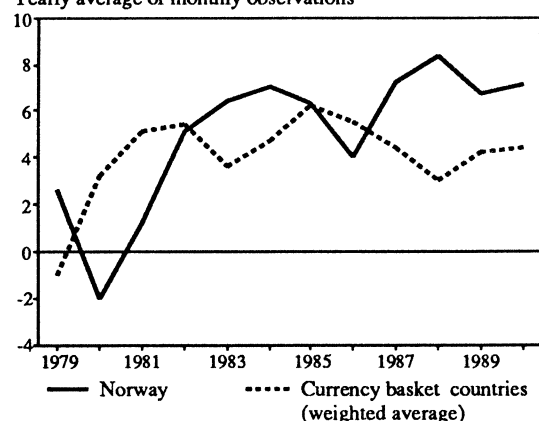
The real interest rate in Norway has partly been higher and partly lower than the real interest rate in

3-MONTHS EURO INTEREST RATES
Yearly average of monthly observations



Source: Bank of Norway and internal calculations.

3-MONTH REAL EURO INTEREST RATES
Yearly average of monthly observations



Source: Bank of Norway and internal calculations.

1) The 1990 figure covers the first seven months only.

the basket countries. Through 1987 and 1988 the real interest rate in Norway rose sharply in relation to real interest rates abroad. An important reason for this was the sharp deceleration in price inflation in Norway. At the same time, accelerating inflation resulted in a reduction in real interest rates for our trading partners. The pronounced decline in the money market rate in Norway from the third quarter

of 1988 to the first quarter of 1989 and an equally marked rise in money market rates for our trading partners from 1988 to 1989 contributed to a sharp reduction in the disparity between Norwegian and foreign real interest rates in 1989. The interest rate differential widened by about 0.2 percentage points to nearly 2.8 per cent from 1989 to 1990, and thus remains at a high level.

BALANCE OF PAYMENTS AND NORWAY'S DISPOSABLE INCOME

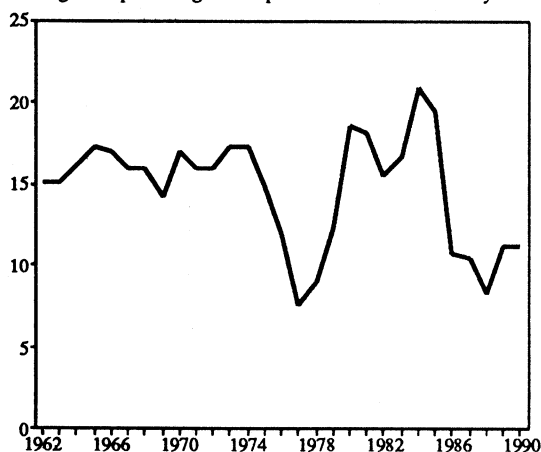
Norway's disposable income and saving

While Gross Domestic Product is an indication of the total creation of value in the country in the course of one year, Norway's disposable income shows what the country has available for private and public consumption and for saving. Norway's disposable income is defined as GDP at current prices less capital consumption and net interest transfers abroad (interest, share dividends and transfers).

The calculations for 1990 show that Norway's disposable income amounted to NOK 539.4 billion, a rise of 7.3 per cent from the previous year. Deflated by the national accounts price index for net domestic use of goods and services, i.e. a price index for consumption and net fixed investment, disposable income expanded by 4.3 per cent from 1989 to 1990 compared with 2.0 per cent one year earlier. Through the year, i.e. from the fourth quarter of 1989 to the fourth quarter of 1990, real disposable income grew as much as 11.5 per cent. Even though Norway's real disposable income increased in both 1989 and 1990, the growth was not sufficient to offset the sharp decline in the years 1986 to 1988 which was particularly due to the fall in oil prices. Norway's real disposable income in 1990 was thus 2.8 per cent lower than in 1985.

A change in real disposable income can be broken down into the contributions from output growth, a change in the interest and transfers balance, and a change in the terms of trade (relationship between export and import prices).

SAVINGS RATIO FOR NORWAY
Savings as a percentage of disposable income in Norway



NORWAY'S REAL DISPOSABLE INCOME Percentage change from previous year (same period previous year)

	1989	1990
Norway's real disposable income	2.0	4.3
Contribution from:		
Output growth	0.8	2.1
Change in terms of trade	1.9	1.8
Change in interest and transfers balance	-0.7	0.4

Higher production resulted in a 2.1 per cent growth in real disposable income from 1989 to 1990. National accounts figures indicate that output growth in the production and pipeline transport of oil and gas alone boosted real income by 0.6 per cent, while a growth in production in other industries increased real disposable income by 1.5 per cent.

The improvement in the terms of trade, due primarily to a rise in crude oil and natural gas prices, boosted real disposable income by 1.8 per cent from 1989 to 1990. An improvement in the interest and transfers balance increased real disposable income by 0.4 per cent. The positive contribution to growth from the interest and transfers balance in 1990 was due to a decline in Norway's net interest expenditure abroad as a result of the reduction in the foreign debt.

Saving for Norway - disposable income less private and public consumption - grew by NOK 4.9 billion from 1989 to 1990. The household sector accounted for NOK 2.1 billion of the growth in saving. The savings ratio for Norway, defined as saving as a percentage of disposable income, is estimated at 11.2 per cent in 1990, a negligible change from the previous year. The composition of saving changed, however, with a decline in domestic fixed investment and a rise in financial investments abroad. The latter correspond directly to the improvement on the current account of the balance of payments.

It must be pointed out that saving for Norway is defined as the sum of net fixed investment (increase in production capital) and net financial investments (increase in net foreign assets as a result of transactions). No account has been taken of changes in the valuation of e.g. petroleum reserves, other natural resources and the foreign debt.

Balance of payments

Preliminary calculations show a current account surplus of NOK 26.1 billion in 1990. In 1989, the surplus was only NOK 1.7 billion, while in 1988 there was a current account deficit of NOK 24.1 billion. The improvement in the balance of payments has thus been significant the past two years. The increase in the surplus in 1990 can entirely be ascribed to a higher surplus on the balance of goods and services. The deficit on the balance of interest and transfers, however, declined through the last two quarters of 1990 as a result of lower interest payments on the foreign debt.

The deterioration in the trade balance in the second quarter of 1990 was followed by a substantial surplus in the third and fourth quarters. The higher surplus in the second half of last year can be explained by two factors: the sharp rise in crude oil prices which took place after Iraq invaded Kuwait in August 1990, and a considerable fall in net imports of ships. The value of Norwegian crude oil and natural gas exports increased as much as NOK 14.6 billion from 1989 to 1990, of which the greatest contribution by far came from higher prices. The trade balance for ships and oil platforms improved substantially in the third and fourth quarters after having shown large deficits in both 1989

and the beginning of 1990. This was particularly related to a sizeable decline in purchases of second-hand ships. All total, ships and oil platforms, etc. contributed to an improvement of nearly NOK 16 billion in the balance of goods and services compared with 1989.

The deficit on the traditional merchandise balance increased from 1989 to 1990, partly as a result of the recovery in domestic demand. The growth in volume for exports and imports was about the same (8.6 and 8.9 per cent respectively), but price changes made a negative contribution to the balance. The price contribution reflects falling prices on the world market for important Norwegian export products such as pulp and paper, chemical raw materials and metals.

Exports of services expanded in value by NOK 6 billion from 1989 to 1990, or some 8 per cent. The increase is primarily due to a vigorous growth in transport services in shipping. Direct purchases in Norway by non-resident households showed a decline through 1990 compared with the previous year, but as a result of the rise in prices this item nevertheless made a positive contribution to the current balance. The increase in imports of services in 1990 was partly related to a growth in direct purchases abroad by resident households, which rose in value by some 9 per cent.

CURRENT BALANCE NOK bill.		Value						Change from 1989 to 1990	
	1989	1990	90.1	90.2	90.3	90.4	Volume contri- bution	Price contri- bution	
Exports	262.1	292.1	68.8	67.6	71.4	84.2	18.5	11.5	
Ships and oil platforms, etc. 1)	6.7	10.6	2.3	3.6	2.4	2.4	4.0	0.0	
Crude oil and natural gas	73.5	88.2	19.4	16.3	21.5	31.0	0.7	14.0	
Traditional goods	109.8	115.2	28.3	28.4	27.6	30.9	9.3	-3.9	
Services	72.1	78.1	18.8	19.4	19.9	19.9	4.6	1.4	
Imports	236.1	243.0	58.8	63.7	57.3	63.2	3.6	3.4	
Ships and oil platforms, etc. 1)	28.8	16.9	3.9	6.3	2.5	4.2	-11.8	-0.1	
Crude oil	0.6	1.6	0.3	0.5	0.4	0.4	0.7	0.3	
Traditional goods	137.0	150.4	37.6	38.2	34.5	40.0	12.3	1.1	
Services	69.7	74.1	16.9	18.7	20.0	18.6	2.3	2.1	
Balance of goods and services	26.0	49.1	10.1	3.9	14.1	21.0	15.0	8.1	
Balance of interest and transfers	-24.3	-23.0	-7.7	-6.2	-4.3	-4.7	..	..
Current balance	1.7	26.1	2.4	-2.4	9.9	16.3	..	..

1) Includes modules and direct exports/imports of goods related to oil activities.

EXPORTS AND IMPORTS
 Percentage change from 1989 to 1990

	Value	Volume	Price
Exports	11.4	7.2	3.9
Ships and oil platforms, etc. ¹⁾	59.4	59.3	0.1
Crude oil and natural gas	19.9	0.9	18.8
Traditional goods	4.9	8.6	-3.4
Services	8.3	6.4	1.8
Imports	2.9	2.2	0.7
Ships and oil platforms, etc. ¹⁾	-41.3	-40.9	-0.7
Crude oil	168.9	125.1	19.5
Traditional goods	9.8	8.9	0.8
Services	6.3	3.3	2.9

¹⁾ Includes modules and direct exports/imports of goods related to oil activities.

Preliminary calculations show that Norway's net foreign debt at end-1989 amounted to 20.8 per cent of GDP. In order to arrive at an estimate for the net debt at the end of last year, an adjustment must be made to the 1990 current balance for estimated valuation changes in assets and liabilities as a result of exchange rate changes. In 1990, these valuation changes were of a considerable magnitude, particularly due to the depreciation of the US dollar (reduces the "krone value" of the debt in US dollars). When valuation changes in the course of 1990 are included, the net debt shows a decline of as much as NOK 42 billion. The net foreign debt totalled some NOK 88 billion at end-1990, equivalent to 13.2 per cent of GDP. This is on a par with the debt ratio recorded by Norway in the early 1970s, i.e. before oil activities were a major factor, but is still higher than the debt ratio of 9.7 per cent from 1985.

PROSPECTS

During an international crisis and war the problems facing the Norwegian economy seem modest. The conflict in the Middle East is nevertheless a reminder of the Norwegian economy's vulnerability and dependence on international conditions. We will also be strongly affected by the conflict.

The Norwegian economy provided a mixed picture in 1990. A low rise in prices and costs, favourable market conditions for exports, higher oil prices and a very moderate growth in domestic demand resulted in a sizeable current account surplus. Norway's industry structure, however, is still to a very great extent based on natural resource-based industries with few signs of shifts towards new competitive industries. In the labour market, the high level of unemployment persisted without noticeable signs of improvement. It can hardly be said that the prospects for achieving full employment and a stable economic trend improved substantially in 1990.

Iraq's invasion of Kuwait caused a price shock in international oil markets, but nevertheless with clearly more controlled effects than with earlier oil crises. For Norway, which is among the world's largest oil exporters, the jump in prices generated extra revenue. As experienced earlier, a high oil price may lead to an international recession which will have an adverse impact on our traditional export industries. The huge investments made on the continental shelf therefore entail a considerable element of uncertainty in the Norwegian economy. Norwegian interests are best safeguarded by long-term stability in oil markets.

The strong commitment to petroleum activities has also had effects on the Norwegian economy other than greater dependence on the economic and political factors which influence the oil market. The high level of activity in the oil and gas sector has generated positive ripple effects for Norwegian manufacturing and service industries, but at the same time this has hampered growth in other exposed sectors. In managing the oil revenues it took a long time before we implemented the plans for establishing a petroleum fund which could help to even out the use of petroleum earnings over time. One drawback of the scheme adopted in 1990 is that the revenue for the fund is defined as a residual after central government expenditure has been covered. With this direct link to current government expenditure, the arrangement may be unsuitable as an

instrument in a more long-term management of petroleum wealth.

Through large parts of the 1980s extensive reforms for increasing the efficiency of the economy have played a key role in the political debate. The deregulation of financial markets, reduction of industry transfers and measures to promote competition in some markets are examples of reforms and structural measures introduced since the mid-1980s. The aim has been to improve the allocation of resources and thereby enhance the growth potential of the mainland economy through more efficient markets and a dismantling of price-distorting tax rules, transfers and direct government intervention and regulations. It has also been the aim of the structural measures to increase the stability of the economy and contribute to an improved resource utilization, including higher employment. Some have looked upon traditional stabilization measures as ineffective and even directly unsuitable for achieving these objectives in a medium-term perspective.

The deregulation of financial markets and reform of the tax system can so far not be said to have been particularly successful or well coordinated. In hindsight it is easy to see that the timing of the measures were unfavourable, particularly from a stabilization point of view. Moreover, the deregulation of financial markets resulted in a misallocation of capital which is virtually unparalleled in the postwar period, i.e. exactly the opposite of what was intended. This has created doubts concerning the ability of Norwegian financial institutions to function as effective credit intermediaries. One of the main tasks of modern financial institutions is to relieve the uncertainty facing other participants in the economy by offering expertise on investment uncertainty and measures of risk dispersion. It is unsatisfactory that so many of these institutions have not displayed a greater ability to manage financial resources in an uncertain world.

The crisis in the banking sector has developed from bad to worse. A sharp fall in property prices and a rise in business failures have resulted in considerable losses for the banks. The fact that the enormous losses in the credit system do not represent socioeconomic losses to the same degree may be some consolation. Some of the investments in failed projects will be used, possibly for purposes other than those originally intended. For first-time

buyers on the housing market the development in recent years with declining prices is naturally an advantage. On the other hand, the fall in housing prices has placed many families in a serious debt squeeze.

One result of the structural reforms of recent years seems to be that both the business sector and the public sector are more willing to undertake cutbacks in employment instead of waiting for better times or finding temporary solutions. The financial costs of ensuring that the unemployed have a reasonable level of consumption are largely charged to government budgets. This entails a lower net charge for expansionary measures, as e.g. public capital investment, on government budgets.

When formulating fiscal policy, however, considerable importance must also be attached to the long-term budget balance. In general this consideration implies caution in undertaking long-term government spending commitments. There seems to be a need for developing indicators which can provide a better continuous indication of how well the budget balance in the medium term is being safeguarded. This will, among other things, make it easier to accommodate future expenditure, particularly National Insurance obligations, and at the same time give households and enterprises a more correct picture of the tax level they can expect.

A lower rise in prices and wages has produced visible results the last few years in the form of improved competitiveness vis-a-vis many of our competing countries. This has strengthened exposed sectors of the economy, and lower rise in import prices is also a good sign. Both statutory regulations and high unemployment have contributed to the

low inflation rate. There are, however, few indications that the way in which the Norwegian economy functions has changed on a permanent basis so that the low unemployment levels recorded in earlier periods can be achieved without the serious danger of a renewed deterioration in competitiveness.

The differences in profitability between various industries is still a key point in any attempt to achieve a low rise in prices and wages along with improvements on the labour market. More market-oriented wage determination can lead to a freeze of our current structure of industries if we are not, at the same time, willing to do something about the many overt and hidden support schemes and restrictions to competitions. The follow-up of the intentions in the new Energy Act and tax reform proposals will here be important contributions.

As we have pointed out earlier, in the short term it is primarily an expansion in private and public services which can absorb unemployment and a continued growth in the labour force. A strengthening of the balance of payments which can permit this in the long term as well requires that we manage our natural resources without squandering too many of the gains and, at the same time, other activities emerge when natural resource-based industries can no longer provide the same contribution to growth. This is a formidable task when it is taken into account that the strong growth and high profitability in key parts of our natural resource-based industries have in fact contributed to limiting the establishment of other exposed activities. Saying that the Norwegian economy has become too "oil dependent" is therefore a variant of "you can't have your cake and eat it too".

ECONOMIC POLICY CALENDAR

January

1 The all-share index of the Oslo Stock Exchange rose by 54 per cent from end-December 1988 to end-December 1989. Total turnover was more than NOK 54 billion.

1 The Savings Banks' Guarantee Fund disbursed NOK 1.7 billion in 1989. Amounts of this magnitude have never been disbursed earlier. The highest amount in earlier years has been NOK 20 million.

8 The central government and the Norwegian Fishermen's Union reach agreement on the distribution of the fishery settlement. The Storting has previously stipulated the amount of fishery support (cf. December 18, 1989).

24 The boards of Fokus Bank and Tromsbanken recommend a merger of the two banks.

26 Freia buys the Swedish chocolate factory Marabou for nearly NOK 1.4 billion. The company thus becomes one of the largest chocolate factories in Europe with 5,300 employees and total sales of about NOK 5 billion.

26 The Government approves the Act on a State Petroleum Fund. The aim of the legislation is to handle transfers to the Treasury with a view to long-term guidelines for the use of revenue.

February

2 The chief executive of the Norwegian State Railways, Kjell Rimberg, decides to resign due to dissatisfaction with the structure of the state company and too detailed political management.

2 The Government proposes that the amount life insurance companies are allowed to invest in shares be increased from 12 to 20 per cent of total assets (implemented with effect from February 12).

9 The Ministry of Environment decides to order the titanium company in Sokndal to build a land depot instead of continued discharges of waste products in the Jøssing Fjord.

9 The Government presents a report on the structure of financial markets. It opens up possibilities for, among other things, more liberal rules for bank mergers.

27 Frionor Polar Group A/S is technically bankrupt. The company starts debt settlement proceedings with a debt of NOK 170 million. Frionor has seven plants and 350 employees in Troms and Finnmark.

27 Dyno Industrier A/S establishes a new formaldehyde and glue factory along with the East German chemical concern AAB-Chemie in Belgium. This is the first industrial project embarked upon by an East German company in the West.

March

7 The Ministry of Environment approves strict emission requirements for Norsk Hydro's magnesium plant in Herøya following a complaint from the Bellona Environmental Foundation. The discharge of dioxins and other chlorinated organic compounds into water shall be reduced by 95 per cent by July 1, 1990.

8 Minister of Environment Hille Valla signs the North Sea agreement concerning reduced discharges of toxic substances in the North Sea. The agreement presupposes that discharges of lead, cadmium, mercury and dioxins shall be reduced by 70 per cent by 1995.

9 Oslo Municipality presents its accounts for 1989 showing a deficit of NOK 1.4 billion. Bookkeeping operations, in the form of loans of NOK 250 million from its own cash reserves and a transfer of NOK 100 million from the Oslo Municipal Electricity Supply Company, entail that the amount is not higher.

13 The Norwegian Federation of Trade Unions (LO) and the Norwegian Confederation of Business and Industry (NHO) reach agreement on the centrally determined pay increases to be granted from April 1. The settlement has a low-pay profile with the lowest paid workers receiving an increase of NOK 3.50-4 an hour, while those earning the most receive an increase of NOK 2-2.50 an hour.

15 The Confederation of Vocational Unions holds its fifth congress and re-elects Jan Andersen Gott as general secretary.

20 60.000 municipal employees in Oslo Municipality go on strike for one day to protest the political management of the municipality.

29 New meteorological calculations result in a halt in the work on Hurum as the main airport. The Government proposes that the further work on a main airport in the Oslo area be concentrated on two alternatives: The expansion of Gardermoen with two parallel runways and a split solution which would divide traffic between Gardermoen and Fornebu.

29 The Parliament (Stortinget) approves the development of the Brage field with Norsk Hydro as operator. Total investment is estimated at NOK 8-9 billion (1989 prices). In the spring of 1989 the Storting decided to postpone the development of the Brage field for five years, but the difficult employment situation with few contracts for the Norwegian supply industry resulted in the new decision.

April

3 The Parliament allocates NOK 126 million (the so-called Coastal Package) for support to the fishery industry.

5 The Parliament allocates NOK 1 billion for the care of the elderly (the so-called Elderly Package).

7 The passenger ferry "Scandinavian Star" belonging to Da-No Line catches fire in Skagerak and 159 people die, of which 27 are children under the age of 16.

20 The Government tables a proposal concerning the partial privatization and stock exchange listing of Raufoss ammunition factory. According to the proposal, the state's current share capital of NOK 260 million will be reduced to NOK 80 million. The remaining NOK 180 million will be converted into subordinated loans. Shares with a nominal value of NOK 70 million will thereafter be offered for public subscription.

24 Kværner buys the family-owned company The Kleven Group for NOK 450 million. The Kleven Group had sales of NOK 700 million in 1989 and 850 employees in Møre and Romsdal. Following the acquisition Kværner's shipbuilding divisions have more than 2000 employees and sales of NOK 2 billion.

May

1 The pay settlement in the central and local government sectors is concluded with a recommended proposal entailing the same increase as the NHO-LO settlement. The question concerning working hours of 37 1/2 hours for everyone in the state is postponed. The state must contribute NOK 80 million in the local government settlement.

4 The Government presents a report on "Guidelines for reforms in company and capital taxation, and consequences for personal taxation". The principles and proposals launched by the "Aarbakke Committee" (cf. October 12, 1989) are generally endorsed.

11 The Government presents a Revised National Budget for 1990, and states that the high unemployment and low growth in the mainland economy are the main problems in the Norwegian economy. A structural programme is presented, with the aim of improving the way in which the power supply market and financial and capital markets function. The fiscal programme for 1990 is to be carried out in approximately the same way as envisaged in the approved budget (cf. December 10, 1989).

22 The organized sale of options starts in Norway two and a half years after the Norwegian Options Market (NOM) was established.

June

3 The central government and agricultural organizations reach agreement on the agricultural settlement. The settlement has a framework of NOK 1.24 billion.

6 UNI and Storebrand announce that they will merge as from January 1, 1991. The merger, which is dependent on Government approval, will entail that UNI and Storebrand will have a market share of 45 per cent in non-life insurance and 41 per cent in the life insurance market.

10 The Norwegian Journalists' Union breaks off negotiations with the Newspapers' Employers' Association and announces strike action for its members in the country's eight largest newspapers. The Employers' Association responds by locking out journalists from 57 other newspapers. The strike is called off on June 15 after a pay agreement is concluded. The journalists are given, among other things, 9 months' maternity leave and a low-pay guarantee.

18 The ballot among LO's members concerning the wage settlement results in a rejection of the offer. 50.1 per cent voted no, 48.1 per cent yes and 1.8 per cent was rejected. 58 per cent of those eligible to vote voted, a factor which made the ballot advisory. This is the first time since 1958 that LO members have rejected a negotiated result. The LO executive accepted the ballot result.

19 The journalists in the Norwegian Broadcasting Corporation (NRK) go on strike. The strike is called off July 13 after NRK journalists obtain a guarantee

for adapting the pay level to the 8 largest newspapers in the course of five years.

29 The board of Statoil recommends building a methanol plant in central Norway. The plant is estimated to cost NOK 2.5 billion (1990 prices), and will require annual gas supplies of 750 million cubic metres. The plant is considered a possible recipient of gas from the Heidrun field.

July

1 The Bank of Norway removes most of the remaining exchange controls. Hereafter residents can freely carry out foreign currency transactions with other countries (except for taking out endowment insurance policies in a foreign company) without a licence. A notification requirement is introduced for imports/exports of notes and coins over NOK 25.000 and for direct currency transactions with other countries (i.e. outside an authorized Norwegian bank).

2 The Government decides to use compulsory arbitration in the settlement between the oil workers' union and employers after negotiations failed and the union warned of a long strike. The strike lasted less than one day.

3 A new agreement between LO and NHO is signed. The most important changes compared with the original agreement (cf. March 13, 1990) are that the pay increase is raised about 0.1 percentage points and that the low-pay guarantee of 30 øre an hour will be paid from April 1 instead of October 1.

3 A/S Norske Shell awards Kongsberg Offshore a contract worth NOK 480 million in connection with the subsea system in the Draugen field in the North Sea. Contracts worth a total of NOK 5.5 billion have thus been awarded for the Draugen field, of which 94 per cent have gone to Norwegian industrial companies.

24 The Government decides to appoint a multidisciplinary national environmental commission to be headed by Prime Minister Jan P. Syse. Other members include the Minister of Environment and representatives from the Nature Conservation Federation, LO, NHO and the Norwegian Association of Local Authorities.

August

2 Iraq invades Kuwait. The invasion results in a sharp rise in oil prices and a drop in share prices.

13 Statoil signs a contract with EB Consultants for building a new terminal at Kårstø. The contract is

worth NOK 200 million. The terminal will be completed in 1993, and at its peak construction will employ 700 people.

22 The boards of Realkreditt and Christiania Bank announce merger plans. Borrowers in Realkreditt strongly oppose the decision and on September 26 the board of Realkreditt rejects a proposal to convert into a limited company and thereby any merger.

September

1 The Nordic Prime Ministers appoint a working group for financing the Kola project. The Kola project involves economic and technological cooperation between the Nordic countries and the Soviet Union to reduce pollution in Fennoscandia, with an emphasis on reducing pollution from nickel plants at Kola. The magnitude of Nordic involvement is not yet clear.

10 The Price Council recommends that Tou breweries be allowed to merge with Nora industrier, thereby reversing its former decision in March when it rejected Nora's request to buy a major block of shares in Tou.

15 110 employees are made redundant in the company Norway Food. The factories in Mastevik in Hordaland and Abelvær in North Trøndelag will be closed as from January 1, 1991.

27 The U.S. introduces an anti-dumping duty of 2.96 per cent for fresh Norwegian farmed salmon. The duty will be re-evaluated in February.

October

1 The savings banks Buskerud, Oppland, Hedmark, Vestfold, Østfold, Østlandet and ABC merge under the new name Sparebanken Nord.

3 The German Democratic Republic (DDR) ceases to exist and becomes a part of the Federal Republic of Germany.

4 The Syse Government presents proposals for the central government budget and National Budget for 1991. The budget shows a deficit of NOK 5.5 billion, or about the same as projected for 1990, and has a spending total of NOK 315 billion (excluding loans and petroleum activities). The Government indicates that there are now signs of an investment-led upturn in the Norwegian economy which will gradually reduce unemployment. Mainland Norway's expenditure on goods and services is expected to rise 1.5 per cent from 1989 to 1990 and by 2.25 per cent from 1990 to 1991. Manufacturing

investment is forecasted to expand by 15 per cent in 1991.

21 The Government decides to change the Norwegian exchange rate system and links the NOK exchange rate to the ECU. The central rate for the NOK is set at NOK 7.9940 for one ECU. The NOK's permitted margin of fluctuation around the central rate is plus/minus 2.25 per cent.

21 Kenya breaks off diplomatic relations with Norway. Norwegian diplomats and aid personnel must leave the country. Kenya has been one of Norway's main partner countries, and received NOK 187.5 million in Norwegian government aid in 1989.

23 The Ministry of Finance establishes regulations for minimum capital adequacy requirements for financial institutions. The financial institutions shall at all times have a capital adequacy corresponding to 8 per cent of the basis of calculation which, among other things, is linked to the value of real property and turnover. The regulations will enter into force on March 31, 1991.

29 The Syse Government resigns after it becomes clear that the coalition parties cannot agree on the strategy for negotiations concerning Norwegian participation in the European Economic Area (EEA).

November

3 The Labour party, with Gro Harlem Brundtland, forms a Government after the coalition Government of Jan P. Syse resigned.

9 Norsk Hydro awards contracts worth NOK 375 million to the Dutch firm Heeremac and the Italian firm Saipem for building modules for the platform on the Brage oil field.

15 The Savings Banks' Guarantee Fund takes over Sparebanken Nordland. The bank receives NOK 500 million in equity capital from the Fund. The money will be distributed over five years.

19 The board of Nurs Tyre AB decides to close Viking Dekk Produksjon A/S in Askim by the end of 1991. The company employs 550 people.

19 Christiania Bank and Sørlandsbanken merge.

20 The Storting decides that the second TV channel, TV2, will be located in Bergen.

28 The State Pay Committee proposes a simplification of the pay system in the central government. Pay differentials and pay improvements will be

permitted without having to change jobs. The Pay Committee proposes a reduction in the number of pay grades from 145 to 30.

30 The board of Alcatel STK adheres to its decision to close down the production of electronic components in Oslo and Kongsvinger and move it to Kilsund. 890 employees are made redundant.

December

3 The shipping company Color Line signs an agreement with the Fred Olsen company Kristiansand Dampshipsselskap for buying three passenger ferries plus their rights for NOK 1.15 billion. Following this purchase Color Line is Norway's largest ferry company with 43 per cent of all passenger traffic.

9 The Norwegian Fishermen's Union and the central government conclude a new fishery agreement, with a framework of NOK 715 million.

11 A committee headed by Professor Håvard Alstadheim presents its report to the Ministry of Agriculture. The Committee has evaluated Norway's future agricultural policy. The Committee proposes food security as an overriding goal for Norwegian agriculture. The instruments should be less dependent on production volume. The report contains a number of special comments concerning the specific structure of the measures.

14 The Government removes all economic sanctions against China, and allows for an increase in visits on a political level between the two countries.

15 Christiania Bank merges with Sunnmørsbanken following an agreement with the Commercial Banks' Guarantee Fund.

19 The Storting approves the Final Budget Bill for 1991. The budget shows a deficit of NOK 11 billion, or NOK 5.9 billion more than the Syse Government's proposal (cf. October 4). Mainland Norway's demand is now expected to rise 3 per cent from 1990 to 1991.

20 The Commercial Banks' Guarantee Fund agrees to provide a special capital guarantee of NOK 1.5 billion for Fokus Bank's obligations in connection with the merger with Rogalandsbanken. This is required for the ministry of Finance's approval of the merger.

20 Christiania Bank announces gross losses of NOK 2.7 billion in 1990. The net loss is estimated at nearly NOK 1 billion.

OUTLOOK FOR 1991 AND 1992

Estimates for macroeconomic developments in Norway for 1991 and 1992 are presented in this section. The calculations have been made with the help of the Central Bureau of Statistics' macroeconomic quarterly model, KVARTS. The aim of these calculations is to illustrate possible cyclical developments in the Norwegian economy in the period ahead. For some variables the results are shown in diagrams as seasonally adjusted and smoothed growth from the previous quarter. More complete results are presented in table 1 which includes projections provided by other institutions.

International economic conditions in 1991 and 1992

In our estimates export market growth passes a through early in 1991 and the sluggish growth will continue until it picks up markedly towards the end of the year. In 1992, market growth is projected to remain high, with an annual growth of some 5 per cent compared with about 3 per cent in 1991.

Oil prices are projected to decline markedly from the fourth quarter of last year to the first quarter of this year, decline slightly again in the second quarter and then show some rise towards the end of the year. As an annual average we have an oil price of about \$20 a barrel in 1991 which rises to \$21 in 1992. The dollar exchange rate is assumed to remain around NOK 5.75 throughout the period. The rise in prices for traditional merchandise imports is projected to be slightly higher in 1991 than in 1990. Underlying this there is a decline in the rise in prices for some finished goods, but a slower fall in prices in 1991 than in the previous year for some raw materials and semi-manufactures. In 1992, the rise in import prices is assumed to be about the same as this year.

Economic policy

Estimates for government expenditure and taxes for 1991 are based on the approved government budget. In 1992, the growth in public consumption is projected to be slightly lower than in 1991, particularly as a result of a slower growth in employment in the local government sector. Excise duty rates in 1992 generally remain unchanged in real terms, while the growth in personal taxes is slightly lower than the growth in income.

Interest rates in private credit institutions are assumed to rise slightly in 1991, while interest rates

in state banks have been lowered somewhat in accordance with the approved budget. In 1992, the interest rate level is projected to fall by about 1 percentage point. The exchange rate for NOK is expected to remain firm.

Prices and wages

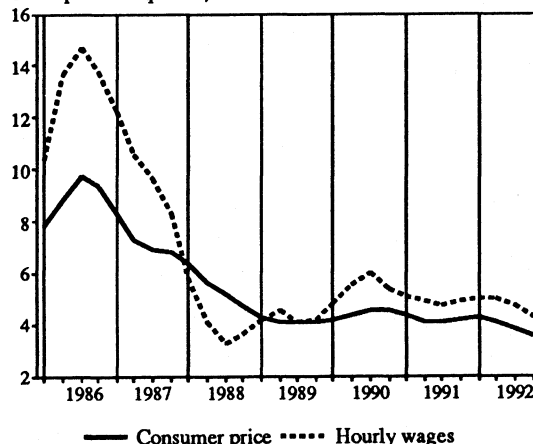
The relatively high growth in wages through 1990 is projected to be slightly reduced in 1991. Measured as an annual average, however, hourly wages in 1991 may still increase at approximately the same rate as in 1990 due to a large carry-over.

The growth in wages in 1990 was relatively high in some sheltered service industries. This rise in costs will gradually have an impact on prices and be a factor which leads to a higher rise in prices in 1991. A low rise in prices for imported consumer goods, a fall in oil prices and productivity gains will, however, counteract the effects of the growth in wages and tax increases for petroleum products, entailing that the inflation rate in 1991 is not expected to be much higher than in 1990.

Exports

Following an extended period involving a sharp growth in traditional merchandise exports, a pronounced decline in the rate of growth is now probable in 1991. The turnaround in market trends came early in 1990. Full-scale operations at the Mongstad refinery throughout 1990 made a significant contribution to the growth from 1989 to 1990. A higher market growth later in 1991 entails that the growth in exports will pick up and rise further in 1992.

GROWTH IN PRICES AND WAGES
From previous quarter, annual rate



Oil exports will probably continue to show a sizeable growth in 1991, while gas exports will be reduced. Gross freight earnings are projected to rise slightly in 1991, but at a considerably lower rate than in the previous year.

Private consumption

Private consumption began to expand in the summer of 1989 after having declined for two and a half years. The growth through 1990 was relatively high and is expected to continue, albeit at a slightly slower pace through 1991 and 1992. This must be viewed in light of a projected rise in real disposable income, inter alia as a result of higher real wages, a slight increase in man-hours, as well as a continued real growth in transfers from the public sector.

Investment

The fall in mainland Norway's investment has been slowing ever since the beginning of 1989 and fixed investment is now expected to show resumed growth early in 1991. Due to the negative carry-over, the annual growth is nevertheless expected to be slightly negative in 1991, while in 1992 a positive growth is likely. The upturn will primarily be evident in manufacturing industry where there has been good profitability and high capacity utilization in some sectors for several years. Some increase in private services is also likely. The fall in housing investment is assumed to level off and then show a gradual rise entailing that the annual growth in 1992 will be positive after four years of decline.

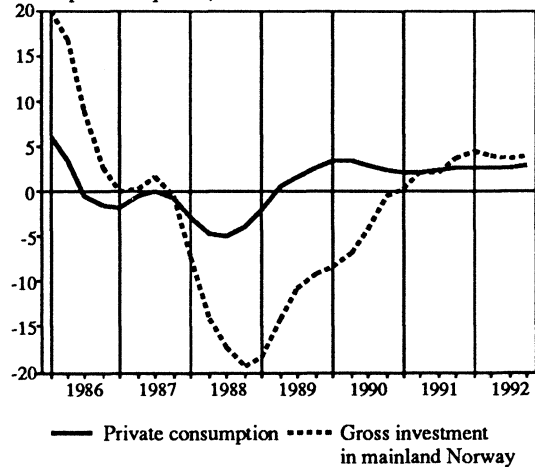
Production

Higher domestic demand is the most important factor underlying the slight rise in output growth in mainland Norway in 1991. In 1992, the increase in market growth abroad will provide a basis for an expansion in traditional merchandise exports and a further growth in production. However, the growth must still be characterized as moderate.

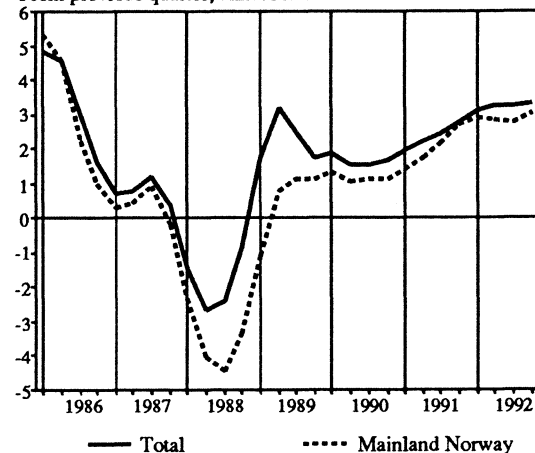
Labour market

The production growth through 1991 and 1992 may result in a slight rise in man-hours in 1991 and 1992. The expansion in sectors which traditionally have many part-time employees entails that the number of people employed will increase slightly more than the level implied by the growth in man-hours worked. The development in unemployment will in such an event depend on how the labour force reacts to higher employment. The decline in the labour force through 1988 and 1989 was a decisive factor in explaining why the unemployment rate was not even higher. In the projection there is a slight in-

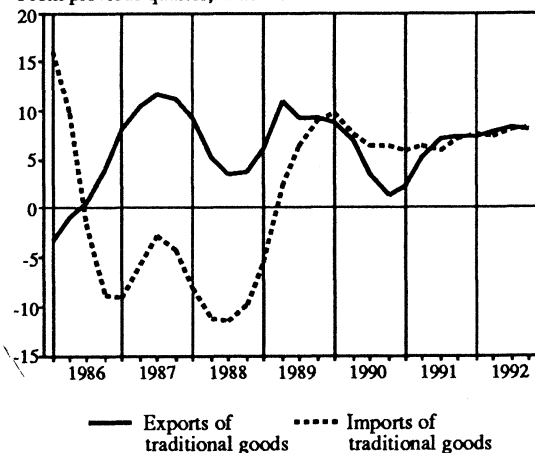
GROWTH IN CONSUMPTION AND INVESTMENT
From previous quarter, annual rate



GROWTH IN GDP
From previous quarter, annual rate



GROWTH IN TRADITIONAL MERCHANDISE
EXPORTS AND IMPORTS
From previous quarter, annual rate



DEVELOPMENT OF SELECTED ECONOMIC VARIABLES

Percentage volume change from previous year unless otherwise noted 1)

	1990	1991					1992		
	Accounts	NB	OECD	FD	BF	CBS	OECD	BF	CBS
Private final consumption expenditure	3.1	2.5	2.1	2.5	1.7	2.0	2.1	2.2	2.5
Public final consumption expenditure	1.9	2.0	2.1	2.6	3.0	2.6	2.0	2.2	1.6
Gross fixed capital formation	-26.5	..	7.4	6.7	5.3	6.6	11.0	5.7	20.5
- Mainland Norway ²⁾	-7.4	3.0	..	3.6	-0.1	-0.5	..	6.0	4.1
Final domestic use of goods and services (incl. stocks)	-0.2	3.0	3.3	3.5	2.4	2.2	3.4	2.6	3.2
- demand from mainland Norway ³⁾	0.8	2.5	..	3.0	2.6	1.7	..	3.0	2.6
Exports	7.2	3.5	4.4	4.3	3.8	2.5	3.3	5.5	5.8
- crude oil and natural gas	0.9	8.0	..	10.4	10.0	5.1	..	4.0	7.5
- traditional exports ⁴⁾	8.6	5.0	..	4.0	4.0	3.4	..	8.0	7.4
Total use of goods and services	2.0	..	..	3.6	2.9	2.3	..	3.6	4.0
Imports	2.2	2.8	5.4	4.2	1.8	3.3	5.1	5.7	6.6
- traditional imports ⁴⁾	8.9	5.0	..	6.0	4.5	5.4	..	6.0	7.0
Gross Domestic Product (GDP)	1.8	3.3	3.2	3.4	3.3	1.9	2.7	2.7	3.0
- Mainland Norway ²⁾	1.2	2.8	..	2.7	2.5	1.4	..	2.5	2.8
Man-hours worked	-1.0	0.8	..	1.0	..	0.5	..	..	0.6
Number of employed	-0.6	1.0	0.8	..	..	0.9	1.0	..	0.8
Labour Force	-0.3	..	0.5	..	..	0.6	0.8	..	0.5
Unemployment (level, per cent)	5.2	..	5.1	..	5.1	5.0	4.9	4.9	4.6
Hourly wages	4.9	..	..	4.0	..	5.1	..	..	4.9
Consumer price index	4.1	4.5	..	4.0	4.3	4.6	..	4.0	4.3
Private consumption deflator in National Accounts	4.2	..	5.2	..	..	4.3	5.5	..	4.2
Import prices traditional goods	0.8	..	..	3.5	..	2.0	..	..	2.8
Export prices traditional goods	-3.4	..	..	2.0	..	0.3	..	..	-0.8
Crude oil price									
NOK per barrel, (level)	148.4	140	165	126	133	113	171	115	118
Crude oil price									
US dollar per barrel, (level)	23.7	..	28.3	21.8	..	19.8	29.4	..	20.8
Current account (level, billion kroner)	26.1	19.0	30.8	10.5	14.3	10.1	34.3	5.5	11.0
- excluding net sale of ships ⁵⁾	22.6	..	..	19.1	20.0	12.8	..	9.1	19.0

1) NB: Forecast according to Economic Bulletin, 1990/4, Bank of Norway.

OECD: Forecast according to OECD Economic Outlook no. 48 (Dec. 1990) in 1984-prices.

FD: Forecast according to the Final Budget Proposal 1991.

BF: Forecast according to Norwegian Bankers Association, autumn 1990.

CBS: Forecast according to Economic Survey 1990. Central Bureau of Statistics.

2) Excluding oil activities and international shipping.

3) Excluding investments in oil activities and international shipping and excluding changes in inventories.

4) All goods except ships, oil platforms and modules for crude oil and natural gas.

5) Excluding net exports of used ships and imports of new ships.

Table 2. Developments in selected macroeconomic variables for 1990. Estimates provided in last year's Survey and figures from the accounts from this year's Survey. Percentage growth from previous year unless otherwise specified.

	Accounts	OECD	MF	CBS-A	CBS-B
GDP	1.8	2.2	1.2	1.8	1.8
- mainland Norway	1.2	2.2	1.1	1.3	1.3
Unemployment, pct. (level)	5.2	4.9	..	5.3	5.4
Consumption deflator	4.2	4.5	..	4.0	4.7
Current balance, bill. NOK (level)	26.1	22.1	13.0	18.8	18.4

crease in the number of job-seekers in 1991 and 1992 as a result of the rise in employment, but not so much as to prevent a slight reduction in the unemployment rate.

Balance of payments

The current account surplus is reduced from 1990 to 1991, but according to our calculations it will still be about NOK 10 billion. The traditional merchandise balance will deteriorate as import prices rise faster than export prices at the same time that imports also show the highest growth in volume.

Evaluation of estimates for 1990 from the last Economic Survey

In the last Economic Survey we presented projections for 1990 prepared by the OECD and the Ministry of Finance in addition to two alternative scenarios from the Central Bureau of Statistics with different assumptions on wage developments following the repeal of the Income Regulation Act. In table 2 we show the projections for some economic variables along with the figures from the 1990 accounts as they appear in this Survey. The main impression from this comparison is that the estima-

tes for 1990 for macroeconomic variables were close to the mark. In particular, the Bureau's estimates for total output growth and for mainland Norway were very close to the figures from the accounts. If, on the other hand, we look at the various demand components, there are some deviations between the estimates and the preliminary figures from the quarterly national accounts. Private consumption rose slightly more and public consumption slightly less in 1990 than indicated by our forecasts. The fall in investment was also greater than we projected, and the growth in imports, and particularly exports, was underestimated.

Too low an estimate for the growth in productivity entailed that the decline in man-hours worked was underestimated. A slightly weaker than expected trend in the labour force entailed that the estimate for unemployment was still correct. The underestimation of productivity growth also contributed to some overestimation of the rise in prices. The actual rise in prices approached the lower limit in the interval delimited by the Bureau's two alternatives for the growth in hourly wages. The estimates for the current account of the balance of payments were relatively close to the outturn, taking into consideration that oil prices were unexpectedly high towards the end of 1990.

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TABLE A1. (1.1) 1) EXPENDITURE ON GROSS DOMESTIC PRODUCT. 2)

Million kroner

	1989*	1990*	-----1989-----				-----1990-----			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Gross domestic product .	627582	668681	147908	155770	159277	164627	159101	156503	167947	185131
Final domestic use of goods and services	601547	619610	139838	147084	151058	163567	149040	152596	153804	164170
Final consumption expenditure	446952	478810	102877	111068	111566	121442	110202	118400	119250	130959
Private final con- sumption expenditure	316014	339724	73065	77948	79451	85549	78885	82831	85309	92699
Specified domestic consumption	306108	328246	71095	75681	76387	82945	76758	80148	81579	89761
Direct purchases abroad, net	9905	11478	1970	2268	3064	2604	2127	2683	3730	2938
Government final consumption	130939	139087	29812	33119	32115	35893	31316	35570	33941	38259
Central government	51645	55553	10688	13235	12105	15618	11331	14782	12936	16504
Civilian	31417	33601	7064	8125	7856	8373	7644	9001	8323	8634
Military	20228	21952	3624	5110	4249	7246	3688	5781	4613	7870
Local government .	79294	83533	19124	19884	20011	20275	19985	20788	21004	21755
Gross capital forma- tion	154594	140800	36961	36016	39492	42125	38839	34195	34554	33211
Gross fixed capital formation	170530	126536	30962	48087	41970	49511	29336	31766	29270	36164
Industries	147588	104094	25955	42696	36576	42360	24348	26701	24129	28916
Oil activities..	42003	15692	2249	18181	11277	10295	3149	3629	4355	4559
Other industries	105585	88402	23706	24515	25299	32065	21198	23073	19774	24356
Government service	22942	22442	5006	5391	5393	7151	4988	5065	5141	7248
Central	9352	9701	1531	2122	2099	3600	1928	2103	2004	3665
Local	13590	12741	3475	3269	3294	3551	3060	2962	3136	3583
Increase in stocks .	-15935	14264	6000	-12070	-2478	-7386	9503	2429	5285	-2952
Oil platforms in progress	-7911	12485	4170	-8191	-2137	-1752	3733	3227	2629	2895
Other increase in stocks and stat- istical discre- pancy	-8025	1779	1830	-3879	-342	-5634	5770	-798	2655	-5847
Exports	262088	292065	60519	66933	66486	68149	68814	67639	71444	84167
Crude petroleum and natural gas	73540	88185	17003	18817	18375	19345	19433	16259	21501	30993
Other exports	188547	203879	43516	48116	48111	48804	49381	51381	49943	53174
- Imports	236052	242993	52448	58247	58267	67090	58753	63732	57301	63206

1) Reference to NATIONAL ACCOUNTS STATISTICS 1988.

2) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A2. (1.2) EXPENDITURE ON GROSS DOMESTIC PRODUCT. 1)

At constant 1988-prices. Million kroner

	1989*	1990*	-----1989-----				-----1990-----			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Gross domestic product .	590026	600930	141808	145342	149567	153310	146766	146016	151215	156934
Final domestic use of goods and services	574180	572998	136389	140415	143809	153568	140386	141534	141718	149360
Final consumption expenditure	428176	440024	100606	106264	106138	115168	103277	109101	108972	118674
Private final con- sumption expenditure	302798	312304	71205	74758	75660	81175	73728	76422	77976	84177
Specified domestic consumption	293473	302494	69315	72597	72786	78774	71821	74131	74861	81680
Direct purchases abroad, net	9325	9810	1890	2161	2874	2401	1907	2291	3115	2497
Government final consumption	125377	127720	29400	31506	30478	33993	29549	32679	30996	34497
Central government	49395	50782	10510	12622	11483	14780	10562	13535	11744	14940
Civilian	29982	30577	6942	7704	7432	7905	7107	8194	7523	7753
Military	19412	20205	3568	4918	4051	6875	3455	5341	4222	7187
Local government .	75983	76938	18890	18885	18995	19213	18986	19144	19251	19557
Gross capital forma- tion	146005	132975	35784	34151	37671	38400	37109	32433	32746	30686
Gross fixed capital formation	161231	118519	30096	45708	39664	45764	27836	29750	27297	33636
Industries	138954	97141	25144	40484	34440	38885	23016	24908	22435	26782
Oil activities..	39532	13311	2248	17075	10593	9616	2804	3091	3614	3803
Other industries	99421	83830	22896	23409	23847	29269	20213	21817	18821	22979
Government service	22277	21377	4951	5224	5223	6878	4819	4842	4862	6854
Central	9064	9228	1514	2057	2033	3460	1861	2010	1894	3462
Local	13213	12149	3437	3166	3191	3418	2958	2832	2967	3392
Increase in stocks .	-15226	14456	5688	-11557	-1993	-7364	9273	2683	5449	-2950
Oil platforms in progress	-7264	11532	4039	-7664	-1999	-1640	3522	3026	2349	2635
Other increase in stocks and stat- istical discre- pancy	-7962	2924	1649	-3893	6	-5724	5751	-343	3100	-5584
Exports	235854	252849	55766	59620	59676	60792	61145	63394	62648	65662
Crude petroleum and natural gas	60928	61490	15099	14905	15430	15494	15187	14505	14766	17033
Other exports	174926	191359	40666	44715	44247	45298	45959	48889	47882	48630
- Imports	220008	224917	50347	54693	53918	61050	54765	58912	53151	58089

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A3. (1.4) GROSS DOMESTIC PRODUCT BY KIND OF ECONOMIC ACTIVITY. 1)
Million kroner

	1989*	1990*	1989				1990			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Gross domestic product .	627586	668685	147909	155771	159278	164628	159102	156504	167948	185132
Industries	491758	522484	116834	121724	125173	128027	125454	120113	131162	145755
Agriculture, hunting, forestry and fishing etc.	17310	18921	3595	1242	8614	3859	3791	1689	9804	3638
Agriculture	9783	10867	1116	-813	7381	2099	1113	-513	8604	1663
Forestry	3926	4037	1597	997	320	1012	1692	1029	322	993
Fishing and breed- ing of fish	3601	4018	881	1059	913	748	985	1173	878	982
Production and pipe- line transport of crude petroleum and natural gas	76612	95137	17137	19960	18731	20783	21418	17633	22031	34055
Crude petroleum and natural gas pro- duction	70812	89553	15697	18560	17355	19200	19988	16315	20755	32494
Pipeline transport .	5800	5584	1440	1400	1376	1583	1429	1318	1276	1561
Manufacturing, mining and quarrying	95944	94810	24239	24787	22228	24689	24242	23400	21727	25442
Mining and quarrying	1767	1912	424	468	437	438	444	496	469	504
Manufacturing	94177	92898	23815	24319	21791	24251	23798	22904	21258	24938
Sheltered manu- facturing	25929	28458	6077	6694	6194	6964	6586	7079	7012	7781
Export-oriented manufacturing	25755	19854	6861	6722	6140	6033	5480	5224	4283	4867
Import-competing manufacturing	42493	44585	10877	10904	9457	11255	11732	10601	9963	12289
Electricity supply ...	25614	27793	7002	6003	5383	7226	7748	6347	5930	7768
Construction	31213	27653	7264	7932	7660	8357	6519	6799	6843	7492
Wholesale and retail trade	62723	65997	14118	16304	15439	16862	15019	16766	15886	18326
Ocean transport and oil well drilling	15496	19737	3555	3425	4133	4383	4734	4864	4885	5254
Ocean transport	13304	15790	3112	2893	3582	3717	4086	3989	3677	4038
Oil and gas explora- tion and drilling ..	2193	3947	443	532	551	667	648	875	1208	1216
Transport, storage and communication	37552	37604	8565	9850	9876	9261	9140	9448	9581	9434
Dwellings	27934	30630	6717	6903	7088	7226	7438	7644	7729	7820
Financial services ...	29617	29021	7557	7506	7388	7165	7608	7158	7051	7203
Other industries	71743	75181	17083	17811	18633	18216	17798	18365	19695	19323
Hotels and restaurants	9870	10546	2133	2418	3063	2256	2262	2597	3208	2479
Business services and rental services	30634	31156	7489	7610	7735	7800	7462	7612	8028	8055
Other service industries	31239	33478	7462	7783	7834	8160	8075	8156	8459	8789
Producers of government services	97981	104946	23140	25056	24733	25052	24854	26560	26435	27097
Central government ...	29446	32006	6697	7764	7368	7617	7334	8338	8129	8205
Civilian	21684	23562	4980	5715	5422	5568	5391	6182	5971	6018
Military	7761	8444	1717	2049	1946	2048	1943	2156	2158	2187
Local government	68536	72940	16443	17292	17365	17435	17520	18222	18306	18892
Correction sectors	37847	41255	7935	8991	9371	11549	8794	9831	10352	12280
Accrued value added tax and investment levy	57887	59801	13339	14154	14334	16060	13779	14446	14822	16754
Indirect taxes adjustment	6245	7123	1318	1532	1591	1804	1754	1707	1780	1881
Imputed bank service charge	-26285	-25669	-6722	-6694	-6554	-6315	-6739	-6323	-6250	-6356
MEMO:										
Mainland Norway	535478	553811	127217	132386	136414	139461	132950	134007	141032	145823
Sheltered activities	457936	479405	106577	112237	119147	119976	112617	115484	125117	126187
Export-oriented industries	27522	21767	7285	7190	6577	6471	5924	5720	4752	5371
Import-competing industries	50019	52640	13356	12959	10690	13015	14410	12803	11163	14264

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A4. (1.5) GROSS DOMESTIC PRODUCT BY KIND OF ECONOMIC ACTIVITY. 1)
At constant 1988-prices. Million kroner

	1989*	1990*	1989				1990			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Gross domestic product .	590030	600934	141809	145343	149568	153311	146767	146017	151216	156934
Industries	456525	462927	110332	111776	116165	118252	114010	111162	117067	120688
Agriculture, hunting, forestry and fishing etc.	18382	20733	3685	1771	8852	4075	4199	2407	9994	4134
Agriculture	9788	11193	1144	-521	7229	1937	1172	-196	8442	1775
Forestry	3653	3658	1510	944	291	909	1538	933	290	897
Fishing and breed- ing of fish	4941	5883	1031	1348	1333	1229	1489	1670	1263	1461
Production and pipe- line transport of crude petroleum and natural gas	62829	65339	15224	15547	15668	16391	16516	15941	14944	17938
Crude petroleum and natural gas pro- duction	56643	59410	13660	14042	14179	14763	14953	14517	13585	16355
Pipeline transport .	6186	5929	1564	1505	1489	1628	1562	1424	1359	1583
Manufacturing, mining and quarrying	90921	91178	22756	23442	21016	23707	23441	22664	21376	23698
Mining and quarrying	1662	1709	383	445	410	424	409	433	420	447
Manufacturing	89259	89470	22373	22998	20606	23283	23031	22231	20956	23252
Sheltered manu- facturing	24914	24634	5984	6529	5952	6449	5996	6232	5946	6460
Export-oriented manufacturing	22524	23166	5736	5649	5400	5738	5965	5804	5622	5774
Import-competing manufacturing	41821	41671	10653	10819	9253	11096	11071	10194	9387	11018
Electricity supply ...	25217	25881	6857	5866	5366	7128	7165	5927	5535	7254
Construction	30925	27218	7380	7743	7559	8243	6598	6676	6619	7325
Wholesale and retail trade	59755	61345	13557	15089	14641	16468	14280	15309	14871	16886
Ocean transport and oil well drilling	12294	14332	2925	3035	3101	3234	3284	3486	3783	3779
Ocean transport	10358	11869	2505	2567	2615	2672	2826	2977	3041	3025
Oil and gas explora- tion and drilling ..	1936	2463	419	469	486	562	458	509	742	754
Transport, storage and communication	35716	36429	8136	9324	9406	8851	8801	8886	9416	9326
Dwellings	25737	26271	6375	6415	6454	6493	6527	6556	6582	6606
Financial services ...	26371	26002	6690	6565	6565	6552	6562	6373	6492	6574
Other industries	68376	68198	16748	16979	17538	17111	16638	16938	17454	17167
Hotels and restaurants	9177	9491	2019	2277	2801	2080	2087	2367	2868	2168
Business services and rental services	29622	28835	7423	7343	7397	7459	7136	7149	7200	7349
Other service industries	29577	29872	7306	7359	7340	7572	7415	7422	7386	7650
Producers of government services	93692	96090	22868	23717	23408	23700	23451	24217	24104	24317
Central government ...	28092	28963	6600	7346	6956	7189	6774	7493	7316	7380
Civilian	20639	21294	4894	5395	5107	5243	4971	5548	5369	5406
Military	7453	7669	1706	1951	1849	1947	1803	1946	1947	1974
Local government	65600	67126	16267	16371	16452	16511	16677	16724	16788	16938
Correction sectors	39813	41918	8609	9850	9995	11359	9306	10639	10044	11928
Accrued value added tax and investment levy	56416	56729	13191	13858	13882	15486	13282	13891	13945	15610
Indirect taxes adjustment	6481	8031	1289	1734	1856	1603	1792	2336	1803	2099
Imputed bank service charge	-23084	-22842	-5870	-5742	-5742	-5730	-5768	-5589	-5704	-5781
MEMO:										
Mainland Norway	514906	521263	123661	126761	130799	133686	126967	126590	132488	135217
Sheltered activities Export-oriented industries	440306	445178	104347	107556	114113	114290	106496	107556	115506	115620
Import-competing industries	24185	24874	6120	6094	5810	6162	6374	6237	6042	6221
Import-competing industries	50415	51211	13194	13111	10876	13234	14098	12797	10940	13376

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A5. (1.6) PRODUCTION AND INCOME. 1)

Million kroner

	1989*	1990*	-----1989-----				-----1990-----			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Gross domestic product	627583	668682	147909	155770	159277	164627	159101	156503	167947	185131
- Interest, dividends etc. to abroad, net	17739	15990	5810	5083	4332	2514	6202	4897	2841	2050
Gross national income	609844	652692	142099	150687	154945	162113	152899	151606	165106	183081
- Consumption of fixed capital	100577	106297	24505	24936	25357	25779	26221	26566	26946	26564
National income	509267	546395	117594	125751	129588	136334	126678	125040	138160	156517
- Transfers to abroad, net	6589	6982	1290	1567	1335	2397	1470	1426	1436	2650
Disposable income for Norway	502678	539413	116304	124184	128253	133937	125208	123614	136724	153867
- Final consumption, total	446952	478810	102877	111068	111566	121442	110202	118400	119250	130959
Saving	55725	60603	13427	13117	16687	12494	15007	5213	17475	22908
Disposable real income for Norway 2)	479174	499719	113464	118276	121955	125479	118214	114903	126639	139962

1) Inconsistencies in the tables are due to computerized rounding.

2) Deflated by price index (1988=100) of final domestic use of goods and services, excl. consumption of fixed capital.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A6. (1.12) BALANCE OF PAYMENTS. SUMMARY. 1)
Million kroner

	1989*	1990*	-----1989-----				-----1990-----			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Current account										
Goods and services										
Exports	262088	292064	60519	66932	66486	68150	68816	67641	71446	84167
Merchandise	189987	213979	44186	49128	46999	49674	49980	48230	51515	64260
Services	72101	78085	16333	17804	19488	18476	18836	19411	19931	19907
Imports	236051	242993	52448	58247	58267	67089	58753	63731	57302	63206
Merchandise	166339	168860	36985	40859	39179	49316	41815	45050	37350	44644
Services	69712	74133	15464	17388	19088	17772	16938	18681	19953	18562
Export surplus of goods and services	26037	49071	8071	8685	8219	1062	10064	3910	14144	20961
Interest and transfers										
From abroad	26120	27554	5850	6487	6506	7278	7508	6813	6183	7050
Interest	22283	23125	4974	5598	5515	6196	6377	5660	5088	6000
Dividends etc.	2001	2375	489	422	459	631	685	570	570	550
Transfers	1836	2054	388	467	531	450	446	583	525	500
To abroad	50449	50526	12951	13134	12174	12190	15181	13135	10460	11750
Interest	35680	34690	8835	8454	9649	8742	9990	8757	7943	8000
Dividends etc.	6344	6800	2438	2647	658	600	3274	2369	557	600
Transfers	8425	9036	1678	2034	1866	2847	1916	2009	1961	3150
Net interest and trans- fers from abroad	-24329	-22972	-7101	-6648	-5668	-4912	-7672	-6323	-4277	-4700
Surplus on current account	1708	26099	970	2037	2551	-3850	2391	-2413	9866	16261
Net changes in assets and liabilities not created by transactions etc.										
Allocation of SDR's ...	-2953	16000	-4748	-6663	1368	7089	2887	1905	6379	4829
Net changes in assets and liabilities due to changes in exchange rates	-1705	..	-4620	-6464	1439	7948	3507	1907	6371	..
Bank of Norway's foreign assets	-806	..	22	234	-96	-966	-1502	-555	-536	..
Other bank deposits and short-term loans	-2425	..	-1712	-2962	116	2134	681	708	3666	..
Long-term loans	679	..	-4542	-6424	1778	9866	5340	2707	7017	..
Loans to abroad	847	..	1610	2688	-358	-3094	-1012	-952	-3776	..
Other assets and liabilities .....	..	..	..	..	..	..	..	..	..	..
Revaluations	-1248	..	-126	-200	-70	-851	-620	-1	8	..
Decrease in the net debt of Norway	-1246	42099	-3778	-4626	3920	3238	5278	-507	16245	21083
Capital account										
Net inflow on long-term capital transactions	25570	..	10074	4320	9585	1592	-5613	-1043	-2442	..
Net inflow on known short-term capital trans- actions	-20728	..	-6683	-4396	-8690	-959	8161	9096	-7070	..
Net inflow on other short-term capital trans- actions (incl. errors and omissions)	-6550	..	-4361	-1961	-3446	3217	-4939	-5640	-355	..
Total net inflow on capital transactions	-1708	-26099	-970	-2037	-2551	3850	-2391	2413	-9866	-16261
Net changes in assets and liabilities due to changes in exchange rates etc.	2953	-16000	4748	6664	-1369	-7089	-2887	-1906	-6379	-4829
Increase in the net debt of Norway	1246	-42099	3778	4626	-3920	-3238	-5278	507	-16245	-21083

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A7. (4.1) EXPENDITURE ON GROSS DOMESTIC PRODUCT.

Growth rates. Percentage change from preceding year

	--1989--					--1990--				
	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter
	A. Percentage change in volume from preceding year					B. Percentage change in prices from preceding year				
Gross domestic product .	2.5	3.5	0.5	1.1	2.4	7.1	3.9	0.0	4.3	9.9
Final domestic use of goods and services	2.4	2.9	0.8	-1.5	-2.7	4.8	3.5	2.9	3.3	3.2
Final consumption expenditure	2.2	2.7	2.7	2.7	3.0	4.1	4.3	3.8	4.1	4.7
Private final con- sumption expenditure	0.1	3.5	2.2	3.1	3.7	3.9	4.3	3.9	4.2	4.5
Specified domestic consumption	0.5	3.6	2.1	2.9	3.7	3.9	4.2	3.7	3.8	4.4
Direct purchases abroad, net	-12.6	0.9	6.0	8.4	4.0	4.4	7.0	11.6	12.3	8.5
Government final consumption	7.4	0.5	3.7	1.7	1.5	4.6	4.5	3.5	3.9	5.0
Central government	15.4	0.5	7.2	2.3	1.1	4.7	5.5	4.2	4.5	4.5
Civilian	8.1	2.4	6.4	1.2	-1.9	5.2	5.7	4.2	4.7	5.1
Military	25.1	-3.2	8.6	4.2	4.5	4.1	5.1	4.2	4.2	3.9
Local government .	2.0	0.5	1.4	1.3	1.8	4.4	4.0	3.1	3.6	5.4
Gross capital forma- tion	3.0	3.7	-5.0	-13.1	-20.1	6.9	1.3	-0.0	0.7	-1.3
Gross fixed capital formation	10.6	-7.5	-34.9	-31.2	-26.5	5.3	2.4	1.5	1.3	-0.6
Industries	10.5	-8.5	-38.5	-34.9	-31.1	5.9	2.5	1.6	1.3	-0.9
Oil activities..	119.2	24.7	-81.9	-65.9	-60.5	5.3	12.3	10.3	13.2	12.0
Other industries	-5.0	-11.7	-6.8	-21.1	-21.5	6.3	1.3	1.0	-1.0	-3.2
Government service	11.1	-2.7	-7.3	-6.9	-0.4	2.3	2.4	1.4	2.4	1.7
Central	38.6	22.9	-2.3	-6.8	0.1	2.5	2.4	1.4	2.4	1.8
Local	-7.5	-13.9	-10.6	-7.0	-0.8	2.2	2.3	1.3	2.4	1.7
Increase in stocks .	..	..	..	..	..	..	..	..	..	..
Oil platforms in progress .....	..	..	..	..	..	..	..	..	..	..
Other increase in stocks and stat- istical discre- pancy .....	..	..	..	..	..	..	..	..	..	..
Exports	7.0	9.6	6.3	5.0	8.0	11.6	3.7	-5.0	2.4	14.3
Crude petroleum and natural gas	13.6	0.6	-2.7	-4.3	9.9	39.1	13.6	-11.2	22.3	45.7
Other exports	4.9	13.0	9.3	8.2	7.4	3.8	0.4	-2.3	-4.1	1.5
- Imports	6.7	8.8	7.7	-1.4	-4.8	5.8	3.0	1.6	-0.2	-1.0

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A8. (4.2) GROSS DOMESTIC PRODUCT BY KIND OF ECONOMIC ACTIVITY.
Growth rates. Percentage change from preceding year

	1989					1990				
	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
	A. Percentage change in volume from preceding year					B. Percentage change in prices from preceding year				
Gross domestic product .	2.5	3.5	0.5	1.1	2.4	7.1	3.9	0.0	4.3	9.9
Industries	2.6	3.3	-0.5	0.8	2.1	8.1	3.9	-0.8	4.0	11.5
Agriculture, hunting, forestry and fishing etc.	-0.2	13.9	35.9	12.9	1.5	-6.2	-7.5	0.1	0.8	-7.1
Agriculture	5.3	2.4	-62.3	16.8	-8.3	0.4	-2.7	67.3	-0.2	-13.6
Forestry	3.3	1.9	-1.1	-0.4	-1.3	7.2	4.0	4.4	1.3	-0.6
Fishing and breeding of fish	-9.8	44.4	23.9	-5.3	18.9	-32.2	-22.6	-10.5	1.5	10.3
Production and pipeline transport of crude petroleum and natural gas	20.4	8.5	2.5	-4.6	9.4	43.2	15.2	-13.8	23.3	49.7
Crude petroleum and natural gas production	21.1	9.5	3.4	-4.2	10.8	49.9	16.3	-15.0	24.8	52.8
Pipeline transport .	14.6	-0.1	-5.4	-8.7	-2.8	-6.3	-0.7	-0.5	1.5	1.4
Manufacturing, mining and quarrying	1.1	3.0	-3.3	1.7	-0.0	0.6	-2.9	-2.4	-3.9	3.1
Mining and quarrying	11.3	6.8	-2.7	2.4	5.4	3.3	-1.9	8.9	4.5	9.2
Manufacturing	0.9	2.9	-3.3	1.7	-0.1	0.6	-2.9	-2.6	-4.1	3.0
Sheltered manufacturing	-0.7	0.2	-4.5	-0.1	0.2	7.8	8.1	10.8	13.3	11.6
Export-oriented manufacturing	3.0	4.0	2.7	4.1	0.6	-8.6	-23.2	-24.4	-33.0	-19.8
Import-competing manufacturing	0.8	3.9	-5.8	1.5	-0.7	1.7	3.8	3.2	3.8	10.0
Electricity supply ...	6.1	4.5	1.0	3.1	1.8	2.5	5.9	4.7	6.8	5.6
Construction	-8.9	-10.6	-13.8	-12.4	-11.1	0.3	0.4	-0.6	2.0	0.9
Wholesale and retail trade	2.7	5.3	1.5	1.6	2.5	2.9	1.0	1.4	1.3	6.0
Ocean transport and oil well drilling ...	9.9	12.3	14.9	22.0	16.9	27.7	18.6	23.6	-3.1	2.6
Ocean transport	11.3	12.8	16.0	16.3	13.2	31.1	16.4	18.9	-11.7	-4.1
Oil and gas exploration and drilling ..	3.6	9.2	8.7	52.7	34.0	11.8	34.1	51.2	43.6	36.1
Transport, storage and communication	-0.7	8.2	-4.7	0.1	5.4	3.7	-1.3	0.6	-3.1	-3.3
Dwellings	3.0	2.4	2.2	2.0	1.7	8.0	8.1	8.4	6.9	6.4
Financial services ...	-5.1	-1.9	-2.9	-1.1	0.3	6.3	2.6	-1.8	-3.5	0.2
Other industries	-0.8	-0.7	-0.2	-0.5	0.3	5.0	4.9	3.4	6.2	5.7
Hotels and restaurants	2.5	3.4	4.0	2.4	4.2	5.6	2.6	3.3	2.3	5.4
Business services and rental services	-2.3	-3.9	-2.6	-2.7	-1.5	3.7	3.7	2.7	6.6	4.8
Other service industries	-0.2	1.5	0.9	0.6	1.0	6.2	6.6	3.9	7.3	6.6
Producers of government services	2.5	2.6	2.1	3.0	2.6	4.9	4.7	3.8	3.8	5.4
Central government ...	2.6	2.6	2.0	5.2	2.6	5.5	6.7	5.3	4.9	4.9
Civilian	2.3	1.6	2.8	5.1	3.1	5.8	6.6	5.2	4.8	4.8
Military	3.2	5.7	-0.3	5.3	1.4	4.8	7.1	5.5	5.3	5.3
Local government	2.5	2.5	2.2	2.0	2.6	4.6	3.9	3.2	3.3	5.6
Correction sectors	1.3	8.1	8.0	0.5	5.0	0.5	2.5	1.2	9.9	1.3
Accrued value added tax and investment levy	-1.5	0.7	0.2	0.5	0.8	2.1	2.6	1.8	2.9	3.5
Indirect taxes adjustment	1.7	39.1	34.7	-2.8	31.0	10.1	-4.3	-17.3	15.2	-20.4
Imputed bank service charge	-5.7	-1.7	-2.7	-0.7	0.9	7.4	2.0	-3.0	-4.0	-0.2
MEMO:										
Mainland Norway	0.5	2.7	-0.1	1.3	1.1	2.9	1.8	1.4	2.1	3.4
Sheltered activities	0.4	2.1	-0.0	1.2	1.2	4.0	3.5	2.9	3.7	4.0
Export-oriented industries	3.5	4.2	2.3	4.0	1.0	-7.9	-21.9	-22.3	-30.5	-17.8
Import-competing industries	-0.2	6.8	-2.4	0.6	1.1	-0.7	1.0	1.2	3.8	8.4

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A9. (4.3) PRIVATE FINAL CONSUMPTION EXPENDITURE.

Growth rates. Percentage change from preceding year

	--1989--					--1990--				
	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter
	A. Percentage change in volume from preceding year					B. Percentage change in prices from preceding year				
Private final consumption expenditure	0.1	3.5	2.2	3.1	3.7	3.9	4.3	3.9	4.2	4.5
Specified domestic consumption	0.5	3.6	2.1	2.9	3.7	3.9	4.2	3.7	3.8	4.4
Food	-1.2	1.2	1.8	2.1	5.8	2.4	3.3	2.9	2.8	2.8
Beverages and tobacco	2.4	-4.2	0.1	-1.2	-1.8	4.5	6.5	6.8	7.1	7.0
Clothing and foot- wear	-1.2	11.5	10.4	11.3	13.5	3.1	2.5	1.8	2.2	2.3
Rent, power and fuel	0.7	2.7	0.9	3.1	1.3	6.0	6.9	6.4	6.1	6.8
Furniture, furnish- ings and household equipment	-0.7	3.9	0.8	1.6	2.6	2.2	1.9	2.4	1.6	2.4
Medical care and health expenses	1.7	1.3	-0.4	-2.5	-1.4	4.1	4.8	3.2	9.0	8.7
Transport and commu- nication	0.6	7.6	-1.2	1.0	-0.4	4.6	3.2	1.8	1.9	4.3
Recreation, enter- tainment, education and cultural service	1.5	3.6	3.1	3.4	2.4	4.1	3.7	4.7	4.1	3.6
Other goods and ser- vices	3.0	5.4	5.3	4.7	8.8	3.6	3.4	2.8	3.3	3.6
Correction items	-12.6	0.9	6.0	8.4	4.0	4.4	7.0	11.6	12.3	8.5
Direct purchases abroad by resident households	-12.7	-2.8	3.8	2.4	3.0	4.4	5.6	7.3	8.0	7.2
Direct purchases in Norway by non- resident households	-12.9	-6.3	1.8	-2.8	1.7	4.5	4.1	3.4	3.7	5.3

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A10. (4.5) GROSS FIXED CAPITAL FORMATION BY TYPE OF CAPITAL GOODS AND KIND OF ECONOMIC ACTIVITY. Growth rates. Percentage change from preceding year

	--1989--					--1990--				
	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	4th quarter a)	1st quarter	2nd quarter	3rd quarter	4th quarter a)
	A. Percentage change in volume from preceding year					B. Percentage change in prices from preceding year				
Gross fixed capital formation	10.6	-7.5	-34.9	-31.2	-26.5	5.3	2.4	1.5	1.3	-0.6
Residential and non-residential buildings etc. 1)	-12.8	-14.9	-17.1	-14.0	-12.7	1.7	1.6	0.8	2.1	2.2
Capitalized expenses on oil exploration and drilling, pipelines for oil and gas	10.2	27.1	-49.5	-44.1	-28.0	6.1	11.6	19.5	26.6	20.5
Ships and boats	43.9	-32.3	-3.5	-81.0	-78.4	15.9	3.4	3.6	-11.3	-12.2
Aircraft, motor vehicles and rolling stock	3.7	92.6	73.5	9.9	67.1	4.8	7.4	1.8	3.6	-1.3
Oil drilling rigs and ships, oil production platforms etc.	314.2	198.8	-91.5	-75.3	-55.9	6.2	95.1	0.4	4.2	9.1
Other machinery and equipment	-8.1	-3.9	-7.6	-8.0	1.4	0.8	0.7	0.4	0.7	-0.7
Industries	10.5	-8.5	-38.5	-34.9	-31.1	5.9	2.5	1.6	1.3	-0.9
Agriculture, hunting, forestry and fishing etc.	-19.8	2.8	-5.4	-8.4	-1.5	1.1	2.3	-0.3	-0.4	-0.8
Agriculture	-12.7	1.8	1.1	-0.8	0.2	0.9	0.9	0.3	1.4	-0.2
Forestry	3.0	1.5	3.6	2.9	1.8	1.2	0.6	1.1	1.8	0.5
Fishing and breeding of fish	-42.3	5.3	-34.2	-40.8	-8.9	3.4	5.5	-2.2	-7.3	-3.1
Production and pipeline transport of crude petroleum and natural gas	119.2	24.7	-81.9	-65.9	-60.5	5.3	12.3	10.3	13.2	12.0
Crude petroleum and natural gas production	121.7	21.4	-82.4	-65.4	-60.9	5.3	12.2	9.9	13.2	11.8
Pipeline transport	-0.4	309.6	16.4	-93.3	-14.1	6.0	11.6	19.5	26.6	20.5
Manufacturing, mining and quarrying	-15.1	-12.7	-10.7	-8.2	6.0	1.5	1.5	0.8	1.6	0.4
Mining and quarrying	35.7	-12.4	11.0	-38.7	-34.1	1.4	1.6	0.7	1.7	1.1
Manufacturing	-16.7	-12.7	-11.5	-6.8	8.1	1.5	1.5	0.8	1.6	0.3
Sheltered manufacturing	-7.9	-21.7	-23.8	-12.9	-15.0	1.6	1.7	0.7	1.8	0.4
Export-oriented manufacturing	-35.9	-14.3	-6.0	-2.6	31.7	1.4	1.3	0.9	1.5	0.4
Import-competing manufacturing	0.7	-5.5	-7.6	-6.7	4.8	1.5	1.6	0.8	1.5	0.2
Electricity supply	-25.0	-27.7	-22.6	-14.7	-0.2	0.1	-0.4	-0.9	0.4	0.6
Construction	-25.9	-6.9	10.1	-18.6	-9.9	0.4	0.2	-0.3	0.7	0.4
Wholesale and retail trade	8.2	35.2	24.2	8.1	4.2	2.3	3.4	1.2	2.9	-0.4
Ocean transport and oil well drilling	49.6	-34.5	7.3	-78.8	-63.6	16.0	2.8	2.2	-10.7	-7.3
Ocean transport	47.3	-35.3	-1.5	-82.0	-79.9	16.2	3.2	3.6	-11.5	-12.2
Oil and gas exploration and drilling ..	-269.6	-41.0	-103.8	-182.3	1867.5	7.6	5.7	11.4	12.9	15.5
Transport, storage and communication	-2.9	24.8	11.6	-0.4	29.4	1.2	3.1	-0.1	1.6	1.2
Dwellings	-19.7	-14.3	-16.6	-19.8	-20.1	2.2	2.3	1.3	2.5	2.3
Financial services ...	-12.5	-5.0	-6.0	-5.8	-10.4	2.1	2.4	1.4	2.3	1.1
Other industries	-20.3	-17.4	-16.1	-15.1	-20.6	0.5	0.2	-0.5	0.9	0.9
Hotels and restaurants	24.6	29.9	24.0	5.8	1.2	1.7	3.0	1.2	2.1	-0.8
Commercial buildings	-27.8	-26.4	-26.4	-24.0	-32.0	0.3	-0.1	-0.7	0.8	1.6
Water supply	1.8	2.0	0.9	0.8	0.7	0.1	-0.5	-0.9	0.6	1.6
Other service industries	-1.1	6.1	5.5	2.7	2.6	0.7	0.8	0.2	0.9	-0.7
Producers of government services	11.1	-2.7	-7.3	-6.9	-0.4	2.3	2.4	1.4	2.4	1.7
Central government ...	38.6	22.9	-2.3	-6.8	0.1	2.5	2.4	1.4	2.4	1.8
Local government	-7.5	-13.9	-10.6	-7.0	-0.8	2.2	2.3	1.3	2.4	1.7
MEMO:										
Mainland Norway	-11.3	-7.0	-8.5	-10.6	-3.9	1.6	1.9	0.6	1.8	1.2
Sheltered activities	-10.0	-6.9	-8.6	-10.8	-6.2	1.7	1.9	0.6	2.0	1.4
Export-oriented industries	-30.9	-14.0	-4.0	-7.0	22.7	1.4	1.4	0.8	1.5	0.5
Import-competing industries	-7.8	-3.5	-10.1	-10.5	2.8	1.4	2.3	0.3	0.3	-0.2

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A11. (4.6) EXPORTS.
Growth rates. Percentage change from preceding year

	-1989-					-1990-				
	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
	A. Percentage change in volume from preceding year					B. Percentage change in prices from preceding year				
Exports, total	7.0	9.6	6.3	5.0	8.0	11.6	3.7	-5.0	2.4	14.3
Commodities	6.5	10.2	6.5	5.3	8.2	12.7	2.6	-7.9	4.1	19.6
Crude petroleum and natural gas from the North Sea	13.6	0.6	-2.7	-4.3	9.9	39.1	13.6	-11.2	22.3	45.7
New ships	-31.1	-6.3	515.3	121.4	142.2	3.5	1.4	-1.5	1.6	-0.4
Second-hand ships ...	-57.0	186.1	191.5	0.6	30.9	21.5	4.9	3.6	-3.2	-13.3
New oil platforms and modules .....	..	..	..	..	..	..	..	..	..	..
Second-hand oil plat- forms .....	..	..	..	..	..	..	..	..	..	..
Direct exports related to oil activities	291.0	-14.8	76.4	2.4	-76.8	7.4	25.5	7.0	11.3	8.5
Other commodities ...	8.4	14.7	5.1	10.8	4.6	0.4	-4.0	-6.8	-5.6	2.8
Agricultural commodities and commodities from forestry and fish- ing	13.4	11.7	4.4	11.5	-11.4	-16.9	-13.2	-6.0	4.2	11.1
Commodities from mining and quarry- ing	-6.3	20.9	0.7	8.5	24.3	6.8	-2.7	8.5	4.8	10.0
Manufacturing goods	7.7	14.6	5.2	10.5	5.6	1.7	-3.7	-7.2	-6.2	2.2
Foods, beverages and tobacco	3.8	8.7	1.1	13.8	17.8	-5.6	-0.4	1.7	4.7	4.8
Commodities from printing and pub- lishing	20.2	33.1	18.8	25.0	25.6	3.8	3.7	2.7	6.6	4.8
Paper and paper products	1.2	2.5	-4.8	-1.3	-3.7	7.2	3.7	-0.6	-3.6	-4.7
Industrial chemi- cals	33.6	19.7	12.5	8.1	7.5	-5.2	-9.7	-10.5	-5.8	1.0
Refined petroleum products	55.6	158.4	78.2	43.1	10.3	39.7	24.9	-9.3	10.5	55.6
Metals	-3.5	8.5	1.4	6.2	3.7	-0.1	-20.0	-22.1	-22.0	-14.7
Textiles, wearing apparel and foot- wear	5.5	23.9	8.4	11.5	-0.2	-2.9	-0.8	-3.7	-5.0	3.7
Wood and wood products, furni- ture and fixtures	67.0	46.0	0.4	9.6	1.9	3.3	11.0	16.1	14.0	15.0
Chemical and mineral products.	11.2	18.9	11.6	7.7	13.1	2.9	5.3	0.8	-0.5	8.6
Other manufactur- ing goods	3.9	0.4	-2.8	12.6	0.3	0.5	0.8	1.1	-3.1	2.0
Electricity	84.2	51.4	8.8	27.8	-9.8	-16.4	17.8	3.3	8.4	-17.3
Services	8.2	8.2	5.8	4.2	7.5	8.7	6.6	3.1	-1.9	0.2
Gross receipts from shipping	13.0	12.2	11.8	8.0	8.5	13.0	8.1	2.4	-7.3	-2.9
Gross receipts from oil drilling	-19.5	-13.0	-5.8	156.9	46.0	10.0	25.4	37.9	32.9	27.7
Direct exports of services related to other oil activi- ties	53.8	-42.7	-45.1	-42.1	-42.3	4.1	3.4	2.9	5.5	4.7
Pipeline services ...	4.5	-15.6	-22.5	-18.1	-27.2	-15.3	-8.1	-9.1	3.5	1.3
Direct purchases in Norway by non- resident households..	-12.9	-6.3	1.8	-2.8	1.7	4.5	4.1	3.4	3.7	5.3
Other services	7.4	15.7	1.7	5.1	16.0	4.1	3.5	2.9	4.5	4.1

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A12. (4.7) IMPORTS.

Growth rates. Percentage change from preceding year

	-1989-				-1990-				-1989-				-1990-			
	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter	
	A. Percentage change in volume from preceding year								B. Percentage change in prices from preceding year							
Imports, total	6.7	8.8	7.7	-1.4	-4.8	5.8	3.0	1.6	-0.2	-1.0						
Commodities	6.3	10.7	8.7	-3.1	-7.3	5.9	2.1	1.5	-1.6	-2.4						
New and second-hand ships	21.3	-19.6	31.1	-65.8	-78.4	18.5	6.4	2.9	-5.1	-13.1						
New and second-hand oil platforms .....	..	..	..	..	..	..	..	..	..	..
Direct imports related to oil activities	348.5	-57.9	-52.0	-39.8	-74.9	4.4	3.4	2.9	5.5	4.7						
Other commodities ...	0.9	15.4	7.0	6.7	8.6	2.5	2.3	0.9	0.3	0.7						
Agricultural commodities and commodities from forestry and fish- ing	-5.9	-7.5	-19.0	-3.5	-17.4	0.9	3.9	-0.2	2.2	0.6						
Crude petroleum ...	-51.9	69.0	183.3	90.6	135.0	40.7	32.2	-2.5	8.6	72.7						
Commodities from mining and quarry- ing	10.1	40.7	18.8	7.9	-1.7	21.7	9.0	9.3	-0.0	-1.5						
Manufacturing goods	1.3	16.0	7.1	6.7	9.5	2.2	1.8	0.7	0.0	0.2						
Foods, beverages and tobacco	-2.3	3.1	3.2	-6.2	12.2	0.4	2.5	3.6	2.6	1.7						
Commodities from printing and pub- lishing	0.5	-3.0	-4.3	1.8	-2.8	-1.1	10.9	7.4	2.8	10.5						
Paper and paper products	-3.4	10.4	-3.6	3.6	8.4	5.9	2.1	2.8	2.0	0.8						
Industrial chemi- cals	-7.4	21.7	-2.1	10.6	23.5	7.2	-3.8	-7.6	-12.0	-5.1						
Refined petroleum products	-40.1	-19.6	-28.9	3.4	5.1	28.0	12.3	-5.3	18.3	51.0						
Metals	5.9	16.3	3.0	22.6	-12.6	6.5	-1.9	-9.0	-11.0	-10.8						
Textiles, wearing apparel and foot- wear	6.8	12.4	6.2	5.1	3.3	-3.0	2.4	3.8	2.1	4.0						
Wood and wood products, furni- ture and fixtures	-8.6	8.7	-8.4	-2.2	-6.8	0.7	7.0	8.9	3.3	2.7						
Chemical and mineral products.	4.9	13.5	-0.5	3.2	4.6	0.8	2.4	4.7	3.1	1.6						
Other manufactur- ing goods	4.1	18.6	10.3	10.7	6.9	0.1	1.0	-0.2	0.2	-3.5						
Transport equip- ment etc. (non- competing)	1.6	73.5	54.6	-5.0	122.6	9.3	8.0	7.0	5.9	5.2						
Electricity	-25.0	19.1	37.7	-15.1	-59.0	29.7	16.3	-1.7	12.6	47.9						
Services	7.6	4.2	5.4	2.1	1.8	5.5	5.1	1.9	2.4	2.6						
Gross expenditures for shipping	13.7	12.1	10.4	5.1	6.7	5.8	3.8	-4.7	-6.6	-3.8						
Gross expenditures for oil drilling	287.8	58.3	-1.3	-18.6	-24.7	4.0	3.4	2.9	5.5	4.7						
Direct imports related to other oil activities	99.7	-2.4	-1.2	-6.7	-33.4	5.5	13.7	13.2	15.7	15.2						
Direct purchases in Norway by resident households	-11.6	-2.9	3.9	2.4	2.9	4.4	5.6	7.3	8.0	7.2						
Other services	3.8	0.0	1.1	-0.1	5.3	6.0	4.9	4.4	5.7	5.8						

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A13. (5.1) GROSS OUTPUT BY KIND OF ECONOMIC ACTIVITY. 1)
Million kroner

	1989*	1990*	1989				1990			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Gross output	1226238	1289915	288783	308159	305171	324125	309555	311306	317859	351195
Industries	1015013	1065476	240754	255703	252984	265572	258303	255192	262591	289389
Agriculture, hunting, forestry and fishing etc.	40158	44048	7930	8988	14661	8578	8883	10095	16066	9004
Agriculture	26030	27914	3956	5123	11771	5180	4112	5673	13186	4943
Forestry	4560	4696	1856	1162	370	1172	1965	1194	375	1162
Fishing and breed- ing of fish	9568	11438	2118	2704	2519	2226	2806	3228	2505	2899
Production and pipe- line transport of crude petroleum and natural gas	105507	126622	23987	27135	26009	28376	29156	25250	29379	42837
Crude petroleum and natural gas pro- duction	99077	120408	22389	25582	24480	26626	27565	23783	27956	41105
Pipeline transport ..	6430	6215	1598	1553	1529	1750	1592	1468	1423	1732
Manufacturing, mining and quarrying	316688	323816	77933	81583	74462	82710	81897	79424	76453	86042
Mining and quarrying	4359	4693	1009	1164	1081	1106	1096	1191	1158	1248
Manufacturing	312329	319123	76925	80419	73381	81604	80801	78233	75295	84794
Sheltered manu- facturing	91259	93601	21334	23625	22315	23985	22103	23557	23021	24920
Export-oriented manufacturing	83307	84176	20403	21240	20302	21362	21482	20499	20079	22117
Import-competing manufacturing	137763	141346	35187	35555	30765	36256	37217	34177	32195	37757
Electricity supply ...	54426	59009	14870	12611	11545	15400	16488	13453	12500	16568
Construction	88948	79930	20835	22379	21829	23905	19050	19546	19600	21733
Wholesale and retail trade	100441	106188	22490	25847	24742	27362	24182	26713	25717	29576
Ocean transport and oil well drilling ...	47321	53871	10696	11698	12165	12762	13062	13653	13046	14110
Ocean transport	44141	48615	10044	10927	11365	11806	12177	12512	11438	12488
Oil and gas explorat- ion and drilling ..	3180	5256	652	772	800	956	885	1141	1608	1622
Transport, storage and communication ...	66882	69494	14967	16939	17474	17501	16560	17215	17695	18025
Dwellings	39076	42283	9422	9696	9896	10063	10280	10543	10671	10787
Financial services ...	42905	42568	10857	10831	10719	10497	10946	10464	10483	10675
Other industries	112662	117649	26766	27994	29483	28419	27798	28837	30981	30032
Hotels and restaurants	20180	21667	4361	4967	6226	4625	4671	5342	6599	5056
Business services and rental services	49613	50366	12143	12336	12504	12630	12102	12332	12884	13048
Other service industries	42869	45615	10261	10691	10753	11164	11025	11163	11498	11929
Producers of government services	147094	157515	33371	36771	36262	40690	35719	39960	38666	43170
Central government ...	56161	60836	11587	14138	13297	17138	12557	16000	14377	17901
Civilian	35080	37393	7833	8891	8712	9644	8450	9934	9328	9681
Military	21081	23443	3754	5248	4585	7494	4107	6066	5049	8220
Local government	90932	96680	21784	22633	22964	23551	23162	23960	24289	25269
Correction sectors	64132	66924	14658	15685	15925	17864	15533	16154	16602	18635
Accrued value added tax and investment levy	57887	59801	13339	14154	14334	16060	13779	14446	14822	16754
Indirect taxes adjustment	6245	7123	1318	1532	1591	1804	1754	1707	1780	1881
MEMO:										
Mainland Norway	1073410	1109422	254100	269326	266997	282987	267337	272403	275434	294249
Sheltered activities	833853	863074	193527	207501	211960	220865	202772	212114	219122	229066
Export-oriented industries	87666	88869	21412	22403	21383	22468	22578	21690	21237	23365
Import-competing industries	151891	157479	39161	39421	33654	39654	41988	38599	35075	41818

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A14. (5.2) GROSS OUTPUT BY KIND OF ECONOMIC ACTIVITY. 1)
At constant 1988-prices. Million kroner

	1989*	1990*	-----1989-----				-----1990-----			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Gross output	1157825	1173738	277975	289449	287081	303321	287138	290513	288684	307403
Industries	954072	964291	230581	238873	236925	247693	238347	237555	237608	250781
Agriculture, hunting, forestry and fishing etc.	40571	44474	7936	9251	14702	8682	9116	10413	15814	9132
Agriculture	25396	27214	3896	5172	11420	4908	4033	5636	12687	4857
Forestry	4262	4268	1761	1101	339	1060	1794	1089	338	1047
Fishing and breed- ing of fish	10913	12992	2278	2977	2944	2714	3288	3688	2789	3228
Production and pipe- line transport of crude petroleum and natural gas	90351	94151	21868	22367	22551	23566	23774	22978	21533	25865
Crude petroleum and natural gas pro- duction	83569	87650	20153	20717	20919	21780	22061	21417	20043	24129
Pipeline transport ..	6782	6500	1714	1650	1633	1785	1713	1561	1490	1736
Manufacturing, mining and quarrying	299670	301971	74698	77091	69965	77916	77350	75378	71186	78057
Mining and quarrying	4123	4240	952	1103	1017	1051	1016	1074	1042	1108
Manufacturing	295547	297731	73747	75988	68948	76865	76334	74304	70144	76949
Sheltered manu- facturing	88683	87018	21083	23151	21531	22918	21048	22118	21082	22770
Export-oriented manufacturing	74643	78801	18483	18661	18121	19377	20188	19839	19182	19593
Import-competing manufacturing	132221	131911	34180	34176	29295	34570	35098	32347	29879	34587
Electricity supply ...	52574	53958	14296	12229	11188	14861	14938	12356	11540	15123
Construction	86456	76092	20632	21646	21133	23044	18445	18664	18505	20479
Wholesale and retail trade	95857	98408	21747	24206	23487	26417	22907	24558	23855	27088
Ocean transport and oil well drilling ...	41511	46239	9776	10432	10483	10821	10961	11649	11661	11968
Ocean transport	38632	42576	9152	9735	9760	9985	10280	10892	10557	10847
Oil and gas explora- tion and drilling ..	2879	3662	624	697	723	836	681	757	1103	1121
Transport, storage and communication ...	63632	65547	14385	16039	16592	16616	15755	16070	16731	16991
Dwellings	36532	37290	9048	9106	9162	9217	9265	9306	9342	9377
Financial services ...	39134	38587	9928	9742	9742	9723	9738	9457	9635	9756
Other industries	107783	107575	26268	26764	27921	26830	26098	26726	27806	26944
Hotels and restaurants	19155	19810	4215	4754	5846	4341	4356	4941	5987	4525
Business services and rental services	47844	46572	11990	11860	11947	12048	11526	11547	11629	11870
Other service industries	40784	41192	10063	10151	10128	10441	10216	10238	10190	10549
Producers of government services	140857	144688	32915	34984	34419	38539	33716	36731	35328	38913
Central government ...	53705	55604	11394	13480	12614	16216	11705	14648	13051	16200
Civilian	33475	34024	7698	8430	8242	9105	7857	9044	8431	8693
Military	20230	21580	3695	5051	4372	7111	3848	5605	4621	7506
Local government	87152	89083	21521	21503	21805	22323	22011	22082	22277	22713
Correction sectors	62897	64759	14479	15592	15737	17088	15074	16228	15748	17709
Accrued value added tax and investment levy	56416	56729	13191	13858	13882	15486	13282	13891	13945	15610
Indirect taxes adjustment	6481	8031	1289	1734	1856	1603	1792	2336	1803	2099
MEMO:										
Mainland Norway	1025963	1033349	246332	256650	254047	268934	252402	255886	255491	269570
Sheltered activities	799801	801136	188678	198632	202330	210162	191017	197850	202261	210008
Export-oriented industries	78766	83041	19435	19765	19139	20428	21204	20913	20224	20701
Import-competing industries	147396	149171	38219	38254	32578	38345	40181	37124	33006	38861

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A15. (5.3) INTERMEDIATE CONSUMPTION BY KIND OF ECONOMIC ACTIVITY. 1)
Million kroner

	1989*	1990*	1989				1990			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Intermediate consumption	598652	621231	140874	152388	145894	159498	150453	154803	149912	166063
Industries	523255	542992	123920	133979	127811	137545	132850	135079	131430	143634
Agriculture, hunting, forestry and fishing etc.	22848	25126	4335	7747	6047	4719	5092	8406	6262	5366
Agriculture	16247	17047	2840	5936	4390	3081	2999	6185	4582	3281
Forestry	634	659	258	165	51	160	272	165	53	169
Fishing and breed- ing of fish	5966	7420	1237	1645	1606	1478	1821	2055	1627	1917
Production and pipe- line transport of crude petroleum and natural gas	28895	31485	6850	7175	7278	7593	7739	7617	7348	8782
Crude petroleum and natural gas pro- duction	28265	30855	6692	7022	7125	7425	7576	7468	7200	8610
Pipeline transport ..	630	631	157	153	152	167	162	149	147	172
Manufacturing, mining and quarrying	220745	229006	53694	56796	52234	58021	57655	56024	54726	60600
Mining and quarrying	2592	2781	585	696	643	668	652	695	690	744
Manufacturing	218152	226225	53110	56100	51590	57352	57003	55329	54037	59856
Sheltered manu- facturing	65330	65143	15257	16931	16120	17021	15517	16478	16009	17139
Export-oriented manufacturing	57552	64321	13543	14518	14162	15329	16001	15275	15796	17249
Import-competing manufacturing	95271	96760	24310	24651	21308	25002	25485	23576	22232	25468
Electricity supply ...	28812	31216	7868	6608	6162	8174	8741	7105	6570	8799
Construction	57735	52276	13571	14447	14169	15548	12531	12747	12757	14241
Wholesale and retail trade	37718	40191	8372	9543	9302	10500	9163	9947	9831	11250
Ocean transport and oil well drilling ...	31825	34134	7141	8273	8032	8379	8328	8789	8162	8855
Ocean transport	30838	32825	6932	8034	7782	8089	8091	8523	7761	8450
Oil and gas explora- tion and drilling ..	987	1309	209	239	249	289	236	267	400	405
Transport, storage and communication ...	29329	31891	6402	7089	7598	8240	7420	7766	8114	8591
Dwellings	11142	11653	2704	2793	2808	2836	2843	2900	2943	2968
Financial services ...	13288	13547	3300	3325	3331	3332	3338	3306	3432	3472
Other industries	40919	42468	9682	10183	10850	10203	10000	10473	11286	10710
Hotels and restaurants	10310	11121	2229	2549	3163	2369	2409	2745	3391	2577
Business services and rental services	18978	19210	4655	4726	4769	4829	4640	4720	4856	4994
Other service industries	11630	12137	2799	2908	2918	3005	2950	3008	3039	3139
Producers of government services	49112	52569	10231	11715	11529	15638	10864	13400	12232	16074
Central government ...	26716	28830	4890	6374	5930	9521	5223	7662	6249	9696
Civilian	13396	13831	2854	3176	3291	4075	3059	3752	3357	3663
Military	13320	14999	2037	3198	2639	5446	2164	3910	2891	6033
Local government	22397	23740	5341	5341	5599	6116	5641	5738	5983	6378
Correction sectors	26285	25669	6722	6694	6554	6315	6739	6323	6250	6356
Imputed bank service charge	26285	25669	6722	6694	6554	6315	6739	6323	6250	6356
MEMO:										
Mainland Norway	537932	555611	126883	136940	130584	143526	134387	138396	134402	148426
Sheltered activities	375917	383669	86950	95264	92814	100889	90155	96630	94005	102879
Export-oriented industries	60144	67102	14127	15213	14806	15997	16654	15970	16485	17993
Import-competing industries	101871	104840	25805	26462	22965	26640	27578	25796	23912	27554

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A16. (5.4) INTERMEDIATE CONSUMPTION BY KIND OF ECONOMIC ACTIVITY. 1)
At constant 1988-prices. Million kroner

	1989*	1990*	1989				1990			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Intermediate consumption	567796	572804	136167	144106	137513	150010	140371	144496	137469	150468
Industries	497547	501364	120249	127097	120760	129442	124338	126393	120541	130093
Agriculture, hunting, forestry and fishing etc.	22189	23740	4251	7480	5850	4608	4917	8006	5819	4998
Agriculture	15608	16021	2753	5693	4191	2971	2861	5832	4245	3082
Forestry	609	610	252	157	48	152	256	156	48	150
Fishing and breed- ing of fish	5972	7110	1247	1629	1611	1485	1800	2018	1526	1766
Production and pipe- line transport of crude petroleum and natural gas	27522	28812	6644	6820	6883	7174	7259	7038	6589	7927
Crude petroleum and natural gas pro- duction	26925	28240	6493	6675	6740	7017	7108	6900	6458	7774
Pipeline transport .	596	572	151	145	144	157	151	137	131	153
Manufacturing, mining and quarrying	208749	210793	51942	53649	48949	54209	53909	52714	49810	54359
Mining and quarrying	2462	2531	568	659	607	627	607	641	622	662
Manufacturing	206288	208261	51374	52990	48342	53582	53303	52073	49188	53697
Sheltered manu- facturing	63769	62385	15100	16621	15579	16469	15052	15886	15137	16310
Export-oriented manufacturing	52119	55636	12747	13012	12721	13639	14224	14034	13559	13818
Import-competing manufacturing	90400	90241	23527	23357	20042	23474	24027	22153	20492	23569
Electricity supply ...	27357	28077	7439	6363	5822	7733	7773	6429	6005	7869
Construction	55531	48874	13252	13903	13574	14801	11847	11988	11886	13154
Wholesale and retail trade	36102	37063	8191	9117	8846	9949	8627	9249	8985	10202
Ocean transport and oil well drilling	29217	31907	6851	7397	7382	7587	7677	8163	7878	8189
Ocean transport	28274	30707	6647	7168	7145	7313	7454	7915	7516	7822
Oil and gas explora- tion and drilling ..	943	1200	204	228	237	274	223	248	361	367
Transport, storage and communication ...	27916	29119	6249	6716	7186	7765	6955	7184	7315	7665
Dwellings	10795	11019	2674	2691	2707	2723	2738	2750	2761	2771
Financial services ...	12763	12585	3238	3177	3177	3171	3176	3084	3142	3182
Other industries	39407	39377	9519	9785	10383	9720	9460	9788	10352	9777
Hotels and restaurants	9978	10319	2195	2476	3045	2261	2269	2574	3118	2357
Business services and rental services	18222	17738	4567	4517	4550	4589	4390	4398	4429	4521
Other service industries	11207	11320	2757	2792	2788	2870	2801	2816	2804	2899
Producers of government services	47164	48598	10048	11267	11011	14839	10265	12514	11224	14595
Central government ...	25612	26641	4793	6134	5658	9027	4930	7155	5735	8820
Civilian	12836	12731	2804	3034	3135	3862	2885	3496	3062	3287
Military	12776	13910	1989	3100	2523	5165	2045	3659	2673	5533
Local government	21552	21957	5254	5133	5353	5812	5334	5359	5489	5775
Correction sectors	23084	22842	5870	5742	5742	5730	5768	5589	5704	5781
Imputed bank service charge	23084	22842	5870	5742	5742	5730	5768	5589	5704	5781
MEMO:										
Mainland Norway	511057	512086	122672	129890	123247	135249	125435	129296	123002	134353
Sheltered activities	359495	355958	84331	91076	88217	95871	84522	90294	86754	94388
Export-oriented industries	54580	58167	13316	13671	13328	14266	14830	14675	14182	14480
Import-competing industries	96981	97961	25025	25143	21702	25111	26083	24326	22066	25485

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A17. (6.1) PRIVATE FINAL CONSUMPTION EXPENDITURE. 1)
Million kroner

	1989*	1990*	-----1989-----				-----1990-----			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Private final consumption expenditure	316015	339725	73065	77949	79451	85550	78885	82831	85309	92699
Specified domestic consumption	306109	328247	71095	75681	76388	82945	76758	80148	81579	89762
Food	59071	62530	13630	14836	14683	15922	14255	15545	15407	17323
Beverages and tobacco	21667	22767	4684	5610	5256	6116	4777	5994	5566	6430
Clothing and foot- wear	22601	25823	4688	5596	5423	6894	5357	6293	6166	8007
Rent, power and fuel	59191	64328	15309	13981	13600	16301	16810	15019	14870	17629
Furniture, furnish- ings and household equipment	21990	22952	5051	5058	5403	6478	5352	5220	5575	6805
Medical care and health expences	13342	14087	3320	3299	3245	3477	3523	3391	3447	3726
Transport and commu- nication	40955	42756	9394	10848	10479	10233	10422	10904	10793	10636
Recreation, enter- tainment, education and cultural service	29430	31548	6659	7150	7397	8224	7152	7716	7958	8722
Other goods and ser- vices	37862	41456	8359	9303	10901	9300	9110	10066	11797	10484
Correction items	9905	11478	1970	2268	3064	2604	2127	2683	3730	2938
Direct purchases abroad by resident households	19945	21768	4066	4843	6561	4475	4173	5395	7258	4941
Direct purchases in Norway by non- resident households	-10040	-10290	-2096	-2576	-3498	-1871	-2046	-2713	-3528	-2003

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A18. (6.2) PRIVATE FINAL CONSUMPTION EXPENDITURE. 1)

At constant 1988-prices. Million kroner

	1989*	1990*	1989				1990			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Private final consumption expenditure	302799	312305	71206	74758	75660	81175	73729	76422	77976	84178
Specified domestic consumption	293473	302495	69316	72597	72787	78774	71822	74132	74861	81681
Food	57403	59016	13438	14450	14120	15395	13601	14709	14419	16287
Beverages and tobacco	20605	20259	4475	5346	4992	5792	4285	5349	4934	5690
Clothing and foot- wear	21853	24429	4716	5344	5310	6483	5258	5901	5911	7358
Rent, power and fuel	55862	56968	14754	13224	12709	15176	15151	13348	13102	15368
Furniture, furnish- ings and household equipment	21276	21750	4926	4896	5204	6250	5119	4934	5286	6411
Medical care and health expences	12868	12773	3289	3177	3099	3303	3331	3165	3021	3257
Transport and commu- nication	38896	39517	9047	10288	9887	9673	9731	10161	9990	9636
Recreation, enter- tainment, education and cultural service	28341	29218	6489	6920	7090	7843	6720	7137	7329	8031
Other goods and ser- vices	36368	38564	8181	8953	10376	8859	8625	9428	10869	9642
Correction items	9325	9810	1890	2161	2874	2401	1907	2291	3115	2497
Direct purchases abroad by resident households	18887	19228	3925	4621	6178	4162	3814	4797	6328	4289
Direct purchases in Norway by non- resident households	-9561	-9418	-2035	-2461	-3305	-1761	-1907	-2506	-3213	-1792

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

NATIONAL ACCOUNTS FOR NORWAY

TABLE A19. (6.9) GROSS FIXED CAPITAL FORMATION BY TYPE OF CAPITAL GOODS AND KIND OF ECONOMIC ACTIVITY. 1)
Million kroner

	1989*	1990*	1989				1990			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Gross fixed capital formation	170530	126536	30962	48087	41970	49511	29336	31766	29270	36164
Residential and non-residential buildings etc. 2)	73204	63540	17767	18200	17824	19412	15364	15220	15649	17308
Capitalized expenses on oil exploration and drilling, pipelines for oil and gas	10508	8487	1373	3479	2921	2735	1947	2097	2069	2374
Ships and boats	23147	9741	4297	4016	4488	10346	3008	4014	758	1961
Aircraft, motor vehicles and rolling stock	6450	10247	1152	1518	2058	1722	2382	2682	2343	2840
Oil drilling rigs and ships, oil production platforms etc.	28658	7125	96	13780	7692	7091	560	1172	1979	3414
Other machinery and equipment	28563	27396	6276	7095	6986	8206	6076	6581	6473	8266
Industries	147588	104094	25955	42696	36576	42360	24348	26701	24129	28916
Agriculture, hunting, forestry and fishing etc.	5363	5154	909	1636	1511	1308	955	1542	1378	1278
Agriculture	3387	3423	558	1025	972	831	573	1040	978	832
Forestry	744	773	82	270	210	182	83	283	220	187
Fishing and breeding of fish	1232	957	269	340	329	294	299	219	180	260
Production and pipeline transport of crude petroleum and natural gas	42003	15692	2249	18181	11277	10295	3149	3629	4355	4559
Crude petroleum and natural gas production	41575	15317	2223	18085	11071	10197	3028	3495	4338	4457
Pipeline transport ..	428	375	27	96	206	99	122	134	17	102
Manufacturing, mining and quarrying	15787	15022	3430	3931	3970	4456	3040	3539	3702	4740
Mining and quarrying ..	724	583	184	148	175	217	164	166	109	145
Manufacturing	15063	14439	3246	3783	3795	4239	2877	3373	3593	4596
Sheltered manufacturing	3900	3219	853	1027	862	1159	679	788	764	989
Export-oriented manufacturing	4826	5050	1092	1136	1234	1364	948	1077	1220	1805
Import-competing manufacturing	6337	6170	1302	1620	1699	1716	1250	1509	1609	1802
Electricity supply ...	7146	6056	1641	1720	1656	2128	1181	1319	1419	2136
Construction	2355	2199	640	520	584	610	598	571	478	552
Wholesale and retail trade	3937	4655	814	911	1034	1179	1138	1144	1150	1223
Ocean transport and oil well drilling ...	21695	10622	3699	3534	4194	10269	2491	3873	792	3466
Ocean transport ...	22457	9129	4170	3786	4307	10195	2784	3863	687	1795
Oil and gas exploration and drilling ..	-763	1493	-471	-252	-113	74	-294	11	105	1671
Transport, storage and communication	8597	10083	1975	2306	2293	2022	2543	2571	2321	2648
Dwellings	24468	20565	6223	6015	6135	6096	5454	5082	5047	4982
Financial services ...	4783	4539	1226	1170	1180	1206	1192	1116	1138	1093
Other industries	11455	9506	3148	2772	2743	2792	2606	2314	2349	2237
Hotels and restaurants	168	193	33	38	52	45	44	48	56	45
Commercial buildings	7812	5708	2269	1874	1816	1852	1668	1369	1391	1280
Water supply	821	832	199	207	204	211	202	207	207	215
Other service industries	2655	2774	647	653	670	684	692	691	695	697
Producers of government services	22942	22442	5006	5391	5393	7151	4988	5065	5141	7248
Central government ...	9352	9701	1531	2122	2099	3600	1928	2103	2004	3665
Local government	13590	12741	3475	3269	3294	3551	3060	2962	3136	3583
MEMO:										
Mainland Norway	106832	100221	25014	26372	26499	28947	23696	24264	24123	28138
Sheltered activities	92969	86688	22085	22858	22852	25174	20952	21011	20784	23940
Export-oriented industries	5551	5633	1276	1284	1409	1581	1112	1243	1329	1950
Import-competing industries	8313	7900	1652	2230	2238	2192	1632	2010	2010	2248

1) Inconsistencies in the tables are due to computerized rounding.

2) Incl. change in breeding stocks, draught animals and the like.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A20. (6.10) GROSS FIXED CAPITAL FORMATION BY TYPE OF CAPITAL GOODS AND KIND OF ECONOMIC ACTIVITY. 1)
At constant 1988-prices. Million kroner

	1989*	1990*	1989				1990			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Gross fixed capital formation	161231	118519	30096	45708	39664	45764	27836	29750	27297	33636
Residential and non-residential buildings etc. 2)	71330	60883	17594	17630	17294	18812	14972	14622	14872	16417
Capitalized expenses on oil exploration and drilling, pipelines for oil and gas	9841	6661	1312	3282	2737	2511	1667	1656	1530	1808
Ships and boats	19031	8290	3682	3443	3641	8265	2491	3321	693	1784
Aircraft, motor vehicles and rolling stock	6219	9671	1170	1524	1954	1571	2255	2645	2147	2624
Oil drilling rigs and ships, oil production platforms etc.	26933	6340	178	12886	7217	6652	532	1091	1781	2936
Other machinery and equipment	27876	26673	6159	6942	6821	7954	5919	6414	6273	8067
Industries	138954	97142	25144	40484	34441	38885	23016	24908	22435	26782
Agriculture, hunting, forestry and fishing etc.	5157	4956	887	1574	1445	1252	911	1488	1323	1233
Agriculture	3303	3319	550	1000	946	807	560	1012	939	809
Forestry	724	744	80	262	204	177	82	271	210	180
Fishing and breeding of fish	1130	893	256	312	295	267	270	205	175	243
Production and pipeline transport of crude petroleum and natural gas	39532	13311	2248	17075	10593	9616	2804	3091	3614	3803
Crude petroleum and natural gas production	39132	13011	2223	16984	10400	9526	2699	2985	3601	3725
Pipeline transport ..	400	301	25	91	193	90	104	106	13	78
Manufacturing, mining and quarrying	15377	14481	3382	3831	3861	4303	2952	3423	3545	4562
Mining and quarrying ..	706	562	182	144	170	210	159	160	104	138
Manufacturing	14671	13919	3200	3687	3691	4093	2792	3263	3441	4423
Sheltered manufacturing	3797	3100	841	1000	838	1118	659	762	729	950
Export-oriented manufacturing	4703	4871	1075	1108	1201	1319	921	1042	1170	1738
Import-competing manufacturing	6171	5948	1283	1579	1653	1656	1212	1459	1542	1735
Electricity supply ...	7012	5940	1621	1679	1621	2092	1171	1299	1383	2087
Construction	2305	2149	632	510	569	594	589	562	464	535
Wholesale and retail trade	3823	4455	813	903	996	1112	1098	1121	1077	1159
Ocean transport and oil well drilling	17707	8957	3117	2989	3389	8212	2042	3207	717	2991
Ocean transport	18453	7769	3569	3246	3495	8143	2309	3197	630	1633
Oil and gas exploration and drilling ..	-746	1188	-452	-257	-106	69	-267	10	87	1358
Transport, storage and communication	8374	9686	1959	2267	2207	1941	2445	2530	2198	2512
Dwellings	23795	19593	6162	5818	5939	5876	5281	4853	4765	4695
Financial services ...	4649	4334	1211	1136	1144	1158	1150	1069	1078	1038
Other industries	11222	9279	3113	2702	2676	2730	2573	2266	2272	2168
Hotels and restaurants	163	185	32	38	50	43	42	47	53	43
Commercial buildings ..	7660	5578	2247	1822	1772	1819	1654	1340	1346	1237
Water supply	806	814	197	201	200	207	201	203	201	209
Other service industries	2593	2701	637	641	654	662	675	676	671	679
Producers of government services	22277	21377	4951	5224	5223	6878	4819	4842	4862	6854
Central government ...	9064	9228	1514	2057	2033	3460	1861	2010	1894	3462
Local government	13213	12149	3437	3166	3191	3418	2958	2832	2967	3392
MEMO:										
Mainland Norway	103992	96250	24730	25644	25682	27936	22990	23453	22966	26842
Sheltered activities	90558	83233	21853	22239	22159	24307	20345	20316	19766	22807
Export-oriented industries	5409	5433	1257	1252	1371	1529	1081	1202	1274	1876
Import-competing industries	8024	7584	1620	2153	2152	2100	1564	1935	1926	2159

1) Inconsistencies in the tables are due to computerized rounding.

2) Incl. change in breeding stocks, draught animals and the like.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A21. (6.13) EXPORTS. 1)
Million kroner

	1989*	1990*	1989				1990			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Exports, total	262088	292066	60519	66933	66486	68149	68814	67640	71444	84168
Commodities	189987	213980	44186	49129	46998	49673	49978	48229	51513	64260
Crude petroleum and natural gas from the North Sea	73540	88185	17003	18817	18375	19345	19433	16259	21501	30993
New ships	1472	3249	545	150	308	469	518	908	692	1131
Second-hand ships ...	4068	6841	472	862	1744	991	1416	2602	1699	1125
New oil platforms and modules	25	24	2	0	14	9	4	1	8	10
Second-hand oil plat- forms	883	395	475	267	141	0	316	0	0	79
Direct exports related to oil activities	224	129	10	20	35	159	11	39	40	40
Other commodities ...	109774	115156	25679	29013	26382	28700	28281	28420	27573	30882
Agricultural commodities and commodities from forestry and fish- ing	4760	4831	1173	1282	944	1360	1137	1258	1098	1338
Commodities from mining and quarry- ing	1920	2293	443	493	487	498	521	538	554	680
Manufacturing goods	102306	107154	23967	27036	24772	26530	26451	26397	25674	28631
Foods, beverages and tobacco	10116	11512	2260	2543	2473	2839	2447	2614	2946	3504
Commodities from printing and pub- lishing	211	277	47	51	51	63	64	62	68	82
Paper and paper products	9854	9538	2326	2586	2450	2491	2472	2449	2330	2286
Industrial chemi- cals	9249	9689	2257	2439	2239	2314	2440	2456	2280	2513
Refined petroleum products	5961	11189	884	1426	1728	1923	2853	2305	2732	3299
Metals	31336	26350	7893	8570	7562	7311	6850	6769	6267	6464
Textiles, wearing apparel and foot- wear	1570	1705	345	397	373	455	424	415	395	471
Wood and wood products, furni- ture and fixtures	2410	3075	479	659	528	743	776	769	660	871
Chemical and mineral products.	9649	11310	2309	2341	2290	2709	2893	2635	2454	3327
Other manufactur- ing goods	21950	22509	5167	6023	5078	5682	5231	5923	5540	5814
Electricity	788	878	96	201	178	311	172	226	247	232
Services	72101	78085	16333	17804	19488	18476	18836	19411	19931	19907
Gross receipts from shipping	42026	46171	9551	10394	10833	11249	11588	11899	10844	11840
Gross receipts from oil drilling	262	471	69	77	51	64	76	100	175	120
Direct exports of services related to other oil activi- ties	1194	708	326	290	267	311	193	164	163	188
Pipeline services ...	1830	1396	488	413	378	551	378	291	320	406
Direct purchases in Norway by non- resident households..	10040	10290	2096	2576	3498	1871	2046	2713	3528	2003
Other services	16748	19049	3803	4054	4461	4430	4555	4245	4899	5349

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

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TABLE A22. (6.14) EXPORTS. 1)
At constant 1988-prices. Million kroner

	1989*	1990*	-----1989-----				-----1990-----			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Exports, total	235854	252849	55766	59620	59676	60793	61145	63394	62648	65662
Commodities	169880	182673	40302	43153	42045	44380	44408	45977	44274	48014
Crude petroleum and natural gas from the North Sea	60928	61490	15099	14905	15430	15494	15187	14505	14766	17033
New ships	1409	3095	529	142	293	445	496	873	650	1077
Second-hand ships ...	3228	5550	388	707	1364	769	1111	2061	1373	1006
New oil platforms and modules	24	22	2	0	13	9	4	1	7	10
Second-hand oil plat- forms	861	352	457	272	132	0	288	0	0	64
Direct exports related to oil activities	210	111	11	19	33	147	9	34	34	34
Other commodities ...	103220	112053	23816	27108	24779	27517	27314	28503	27444	28791
Agricultural commodities and commodities from forestry and fish- ing	5654	5801	1255	1500	1156	1743	1402	1566	1289	1544
Commodities from mining and quarry- ing	1738	1971	389	451	439	459	470	454	476	571
Manufacturing goods	94673	102983	22063	24822	22851	24936	25277	26119	25254	26334
Foods, beverages and tobacco	10552	11674	2292	2643	2632	2985	2490	2673	2995	3516
Commodities from printing and pub- lishing	204	256	46	49	49	60	61	58	61	75
Paper and paper products	8935	8765	2198	2362	2170	2205	2252	2249	2141	2123
Industrial chemi- cals	9162	10244	2157	2318	2287	2400	2583	2608	2473	2580
Refined petroleum products	4653	7469	773	1082	1394	1404	1998	1927	1995	1548
Metals	26493	27780	6538	7026	6338	6591	7093	7124	6731	6831
Textiles, wearing apparel and foot- wear	1546	1700	337	390	364	454	418	423	406	453
Wood and wood products, furni- ture and fixtures	2357	2638	469	672	511	705	685	675	560	718
Chemical and mineral products.	9338	10540	2232	2288	2226	2593	2655	2554	2398	2933
Other manufactur- ing goods	21433	21918	5021	5994	4879	5540	5040	5828	5493	5556
Electricity	1156	1298	109	335	333	379	165	365	425	342
Services	65975	70176	15464	16467	17632	16413	16737	17417	18374	17648
Gross receipts from shipping	36652	40347	8678	9236	9266	9471	9736	10327	10011	10272
Gross receipts from oil drilling	238	324	66	69	46	56	58	65	119	82
Direct exports of services related to other oil activi- ties	1138	648	316	276	252	294	181	152	146	169
Pipeline services ...	2345	1855	643	550	523	629	543	427	428	458
Direct purchases in Norway by non- resident households..	9561	9418	2035	2461	3305	1761	1907	2506	3213	1792
Other services	16041	17584	3725	3874	4240	4201	4312	3940	4457	4875

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

NATIONAL ACCOUNTS FOR NORWAY

TABLE A23. (6.15) IMPORTS. 1)
Million kroner

	1989*	1990*	-----1989-----				-----1990-----			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Imports, total	236052	242993	52448	58247	58267	67090	58753	63732	57301	63206
Commodities	166340	168860	36985	40858	39179	49317	41816	45052	37349	44644
New and second-hand ships	25813	13645	4420	4333	5973	11087	3778	5847	1940	2079
New and second-hand oil platforms	173	2077	111	7	29	25	11	134	164	1768
Direct imports related to oil activities	2784	1154	367	608	587	1221	160	300	373	321
Other commodities ...	137570	151985	32087	35911	32589	36983	37867	38770	34872	40476
Agricultural commodities and commodities from forestry and fish- ing	5463	4872	1481	1518	1122	1342	1423	1228	1106	1115
Crude petroleum ...	588	1582	118	191	173	107	263	526	358	435
Commodities from mining and quarry- ing	2276	2737	499	570	560	646	766	740	604	626
Manufacturing goods	129209	142763	29981	33627	30727	34873	35405	36269	32797	38292
Foods, beverages and tobacco	6332	6695	1425	1586	1642	1679	1506	1696	1580	1914
Commodities from printing and pub- lishing	1935	2045	458	452	506	519	493	464	530	558
Paper and paper products	4317	4604	1062	1113	1010	1131	1197	1103	1067	1236
Industrial chemi- cals	8221	8606	1912	2333	2017	1958	2237	2110	1963	2294
Refined petroleum products	3215	3455	840	902	682	791	758	608	834	1255
Metals	14181	13831	3381	3776	3071	3953	3856	3539	3352	3084
Textiles, wearing apparel and foot- wear	12300	13524	3105	2656	3286	3252	3574	2928	3526	3496
Wood and wood products, furni- ture and fixtures	4551	4678	1076	1176	1001	1298	1251	1173	1012	1242
Chemical and mineral products.	24809	26809	5689	6354	5852	6913	6611	6619	6229	7350
Other manufactur- ing goods	41934	46395	9987	10733	9416	11797	11966	11820	10447	12163
Transport equip- ment etc. (non- competing)	7413	12121	1044	2545	2242	1581	1957	4208	2256	3700
Electricity	33	32	7	5	7	14	10	7	6	9
Services	69712	74133	15463	17388	19088	17772	16937	18681	19952	18562
Gross expenditures for shipping.....	27467	28916	6158	7174	6930	7206	7165	7550	6801	7400
Gross expenditures for oil drilling	732	705	92	151	225	264	150	154	193	208
Direct imports related to other oil activities	4174	4143	859	976	977	1362	953	1091	1055	1045
Direct purchases in Norway by resident households.....	20555	22424	4189	4984	6701	4681	4296	5555	7409	5164
Other services	16784	17945	4167	4103	4255	4260	4374	4331	4495	4745

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

TABLE A24. (6.16) IMPORTS. 1)
At constant 1988-prices. Million kroner

	1989*	1990*	-----1989-----				-----1990-----			
			1st quarter	2nd quarter	3rd quarter	4th quarter	1st quarter	2nd quarter	3rd quarter	4th quarter a)
Imports, total	220008	224917	50347	54693	53918	61050	54765	58912	53151	58089
Commodities	155013	157749	35458	38629	36180	44745	39246	41975	35044	41484
New and second-hand ships	20628	11142	3698	3582	4676	8672	2972	4697	1601	1872
New and second-hand oil platforms	168	1650	105	7	31	25	9	111	120	1410
Direct imports related to oil activities	2644	1052	356	578	556	1154	150	277	334	290
Other commodities ...	131573	143906	31299	34463	30918	34894	36116	36890	32989	37912
Agricultural commodities and commodities from forestry and fish- ing	5308	4660	1514	1415	1073	1306	1400	1147	1035	1079
Crude petroleum ...	482	1085	105	165	131	82	177	466	249	193
Commodities from mining and quarry- ing	1879	2175	434	491	447	508	611	583	482	499
Manufacturing goods	123876	135963	29240	32388	29262	32986	33920	34688	31218	36137
Foods, beverages and tobacco	6266	6458	1434	1565	1623	1644	1478	1614	1522	1844
Commodities from printing and pub- lishing	1853	1815	453	423	472	505	439	404	480	491
Paper and paper products	4122	4314	1025	1073	963	1062	1131	1035	998	1151
Industrial chemi- cals	7145	8057	1681	2024	1693	1747	2045	1983	1873	2157
Refined petroleum products	2667	2364	745	720	573	629	599	512	592	661
Metals	12342	13096	3031	3270	2623	3418	3524	3368	3216	2988
Textiles, wearing apparel and foot- wear	12858	13728	3316	2906	3350	3286	3726	3085	3521	3396
Wood and wood products, furni- ture and fixtures	4478	4367	1069	1171	995	1243	1162	1073	973	1158
Chemical and mineral products.	24130	25349	5617	6277	5668	6568	6377	6248	5851	6874
Other manufactur- ing goods	41155	45857	9867	10549	9280	11460	11700	11640	10270	12247
Transport equip- ment etc. (non- competing)	6861	10559	1002	2411	2023	1425	1738	3727	1923	3171
Electricity	28	23	6	4	6	11	8	6	5	5
Services	64995	67168	14889	16063	17738	16305	15519	16937	18107	16605
Gross expenditures for shipping.....	25098	27231	5895	6362	6347	6494	6608	7024	6668	6932
Gross expenditures for oil drilling	695	644	89	144	213	249	141	142	173	188
Direct imports related to other oil activities	3819	3315	800	894	889	1236	780	883	829	823
Direct purchases in Norway by resident households.....	19463	19807	4043	4756	6310	4355	3926	4939	6460	4482
Other services	15920	16170	4062	3908	3979	3971	4064	3949	3977	4180

1) Inconsistencies in the tables are due to computerized rounding.

a) For the 4th quarter of 1990 the calculations are based upon forecasts or available estimations done by the Central Bureau of Statistics.

NATIONAL ACCOUNTS FOR NORWAY

TABLE A25. EMPLOYMENT BY KIND OF ECONOMIC ACTIVITY. EMPLOYEES AND SELF-EMPLOYED.
Absolute figures and annual percentage change

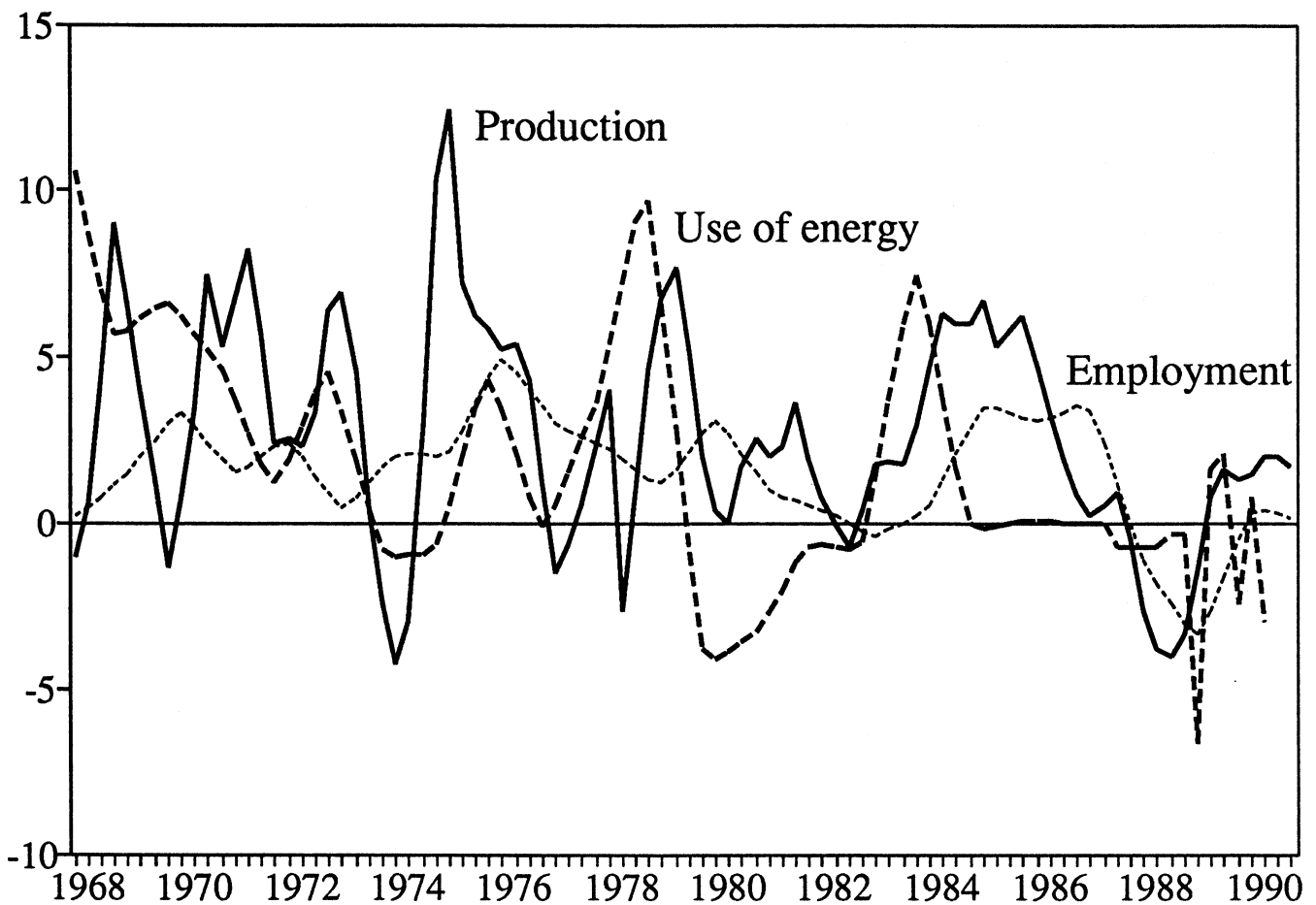
	Man-hours worked (Millions)			Number of persons (1000)			Full-time equivalent employees (1000)		
	1989	1990	%	1989	1990	%	1989	1990	%
Total	2932.3	2903.3	-1.0	2061	2048	-0.6	1788	1778	-0.5
Industries	2240.5	2193.9	-2.1	1507	1478	-1.9	1334	1312	-1.7
Agriculture, hunting, forestry and fishing etc.	259.5	251.2	-3.2	134	130	-2.6	114	111	-2.6
Agriculture	210.9	204.3	-3.1	106	103	-2.6	87	85	-2.5
Forestry	12.3	12.0	-2.3	7	7	-1.9	7	7	-1.9
Fishing and breeding of fish	36.2	34.8	-3.8	20	20	-2.8	19	19	-3.1
Production and pipe- line transport of crude petroleum and natural gas	24.4	24.4	0.2	15	15	-0.1	14	14	0.1
Crude petroleum and natural gas pro- duction	24.0	24.1	0.2	15	15	0.0	14	14	0.1
Pipeline transport ..	0.4	0.3	-4.2	0	0	-4.5	0	0	-4.3
Manufacturing, mining and quarrying	473.2	462.4	-2.3	314	306	-2.4	291	285	-2.2
Mining and quarrying	8.7	8.8	0.7	6	6	0.0	6	6	0.1
Manufacturing	464.4	453.6	-2.3	308	300	-2.4	286	279	-2.3
Sheltered manu- facturing	128.8	125.9	-2.2	90	88	-2.7	79	77	-2.4
Export-oriented manufacturing	69.3	67.9	-2.1	45	44	-1.9	43	42	-1.8
Import-competing manufacturing	266.3	259.8	-2.4	173	168	-2.4	163	160	-2.3
Electricity supply ...	29.6	29.5	-0.3	20	20	0.0	20	20	0.1
Construction	245.4	229.4	-6.5	153	144	-5.8	148	139	-5.8
Wholesale and retail trade	406.1	392.2	-3.4	296	287	-3.2	247	240	-2.8
Ocean transport and oil well drilling ...	59.3	71.9	21.2	33	39	18.1	33	39	18.1
Ocean transport	53.0	65.3	23.1	29	35	19.9	29	35	19.9
Oil and gas explora- tion and drilling ..	6.3	6.6	4.9	4	4	5.0	4	4	5.0
Transport, storage and communication	222.5	215.1	-3.3	150	145	-2.8	136	132	-2.8
Dwellings	2.0	2.0	-0.3	1	1	0.0	1	1	0.2
Financial services ...	88.7	86.6	-2.3	62	61	-2.1	57	56	-1.8
Other industries	429.9	429.1	-0.2	328	328	0.1	273	274	0.4
Hotels and restaurants	67.8	65.8	-2.9	55	54	-2.8	43	42	-2.3
Business services and rental services	133.2	130.4	-2.1	90	89	-1.8	82	81	-1.5
Other service industries	228.9	232.9	1.7	182	186	1.9	148	151	2.3
Producers of government services	691.8	709.5	2.5	554	570	2.9	454	466	2.8
Central government	218.4	224.8	3.0	145	149	3.1	136	141	3.4
Civilian	124.6	128.3	3.0	91	93	3.2	83	86	3.5
Military	93.8	96.5	3.0	54	56	3.1	53	55	3.2
Local government	473.4	484.6	2.4	410	421	2.8	317	326	2.6
MEMO:									
Mainland Norway	2848.6	2807.0	-1.5	2013	1994	-0.9	1740	1724	-0.9
Sheltered activities	2455.7	2423.6	-1.3	1762	1749	-0.7	1501	1491	-0.7
Export-oriented industries	78.1	76.7	-1.8	51	50	-1.7	49	48	-1.6
Import-competing industries	314.8	306.7	-2.6	200	196	-2.5	190	186	-2.4

NATIONAL ACCOUNTS FOR NORWAY

TABLE A26. COMPENSATION OF EMPLOYEES BY KIND OF ECONOMIC ACTIVITY.
Growth rates. Annual percentage change

	Wages and salaries per full-time equi- valent employees	Wages and sal- aries per man- hours worked	Compensation of employees per man- hours worked
	%	%	%
Total	4.6	4.9	4.8
Industries	4.8	5.0	4.8
Agriculture, hunting, forestry and fishing etc.	6.0	6.5	6.3
Agriculture	5.0	5.5	5.3
Forestry	5.0	5.4	5.2
Fishing and breeding of fish	7.9	8.4	8.3
Production and pipeline transport of crude petroleum and natural gas	5.1	5.0	4.8
Crude petroleum and natural gas produc- tion	5.1	5.0	4.8
Pipeline transport ..	5.2	5.1	5.0
Manufacturing, mining and quarrying	5.9	5.9	5.7
Mining and quarrying	7.4	6.6	6.4
Manufacturing	5.8	5.9	5.7
Sheltered manu- facturing	5.6	5.4	5.2
Export-oriented manufacturing	7.3	7.6	7.4
Import-competing manufacturing	5.5	5.6	5.4
Electricity supply	4.3	4.8	4.6
Construction	2.0	2.7	2.6
Wholesale and retail trade	6.5	7.1	6.9
Ocean transport and oil well drilling	-3.2	-5.7	-6.5
Ocean transport	-4.0	-6.5	-7.4
Oil and gas explora- tion and drilling ...	5.5	5.6	5.5
Transport, storage and communication	4.8	5.3	5.0
Dwelling	5.4	5.9	5.8
Financial services	5.5	6.1	5.9
Other industries			
Hotels and restaurants	6.0	6.6	6.4
Business services and rental services	5.4	5.9	5.8
Other service industries	4.6	5.2	5.1
Producers of government services	4.3	4.6	4.6
Central government	4.3	4.7	5.7
Civilian	4.3	4.8	5.7
Military	4.3	4.5	5.7
Local government	4.3	4.5	4.1
MEMO:			
Mainland Norway	4.8	5.2	5.1
Sheltered activities	4.6	5.1	5.0
Export-oriented industries	7.3	7.5	7.3
Import-competing industries	5.5	5.6	5.4

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The Research Department The Central Bureau of Statistics, Norway

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Figure, page no. 59 : PRODUCTION, EMPLOYMENT AND USE OF ENERGY IN NORWAY 1968-1990

Estimated growth from preceding quarter, seasonally adjusted.
Per cent annual rates.

PRODUCTION: Gross domestic product excluding
oil and shipping.

EMPLOYMENT: Number of employees.

USE OF ENERGY: Excluding transport oil and solid fuel.

THE RESEARCH DEPARTMENT IN THE CENTRAL BUREAU OF STATISTICS

The CBS enjoys a long tradition as a research institution, although the Research Department (as a separate part of the organization) has only existed for one-third of the 110 years that the Bureau has existed. Proximity to primary data sources is of undisputed benefit for a research institution within a statistical bureau. The autonomy traditionally maintained by statistical bureaus and the central position they hold in the production and distribution of information in our societies is also invaluable in research work. The Research Department of the CBS has enjoyed these advantages since its inception.

From the beginning...

From an early stage there has been a research tradition within the CBS. From the beginning, statistical information was used to enlighten the general public about social conditions. Anders Nicolai Kiær, the Director General for the first 37 years after the foundation of the Bureau in 1876, ensured that this became a tradition.

National Accounts, Tax Research, MODIS

The Research Department was established in 1950. The early activities of the Research Department comprised national accounting, input-output analysis, consumer demand analysis, tax research and economic surveys. The first large-scale model (MODIS) was developed in 1960. The postwar austerity of the 1940s and

early 1950s brought economic issues to the forefront of politics. Input-output analysis based on the new national accounts came to be adopted as a multitask tool for policy analysis and has been a cornerstone in the Department's work since then.

Population

In the 1960s the population wave created by the baby boom of the 1940s swelled the inflow to the labour market. As a result there was an increasing interest in population issues, changes in the labour market, and migration, which led to the establishment of a demographic research unit within the CBS to cover these fields.

Environment

From the early 1970s a growing interest in environment and natural resource issues emerged, which in 1978 led to the establishment of another research unit in the CBS. The latter two units were formally incorporated into the Research Department from 1983.

Some reflections

During the last 10 to 15 years there has been a great expansion of the Department's activities. The issues of thirty years ago are no less important today. The concepts of the national accounts - at that time known and understood only by a small community of postwar economists - are now a general frame of reference in public debate, taught

in school at the intermediary level etc. The development of macroeconomic models and other model tools in this period has been prolific. The challenging task of managing a modern economy has not, however, become any easier. We have to recognize that even the best models we are able to build at present fall far short of ideal requirements.

The tax research activity, which also started in the 1950s, has provided both government and political opposition parties with confidential analyses of the effect of changes in tax rules for more than thirty years. The volume of this service increased immensely after computerbased tax models were developed in the late 1960s. The 1980s have provided more volatility in economic development than any other part of the postwar period. This has accentuated the need to better understand the international environment and the changes that take place in our own society. There is less unanimity about the future, and perhaps also less belief in traditional forecasting. The practice of extending observed trends without asking what supports such trends, and to take a narrow view with regard to the set of interdependent factors, is still widespread. Furthermore, there is an overwhelming tendency to underestimate the uncertainty of projections.

The future

Norwegian society in the 1990s, the 2000s and the 2010s is being formed by decisions made today. The major challenge for the Research Department is to contribute information to this process and to provide the requisite expertise for providing the best tools and analyses for such decisions

in the future.

Main activities

The activities of the Research Department comprise:

National accounts, input-output data, balance of payments.

Economic analysis, macroeconomic models, economic surveys, tax research, input-output analysis, econometric studies.

Population models, family and fertility studies, labour market analysis.

Natural resource analysis, energy analysis, environmental studies.

Petroleum economics.

Regional demographic and geographical analysis.

The research department - civil service and academic activity

The scope of research activity is not matched by many other research institutions in Norway. One important dimension in this range of activities is the emphasis on the use of detailed information to create a picture of the aggregate development in various areas. A second dimension is the emphasis on providing tools and analyses that can be used in general social planning. Models are made available for ministries and others, and forecasts and analyses, e.g. economic growth, population development and indicators of environmental standards are made regularly or on request. A third dimension is the emphasis on academic

standards, contact with international research activities etc. to support and complement the applied orientation.

Financing

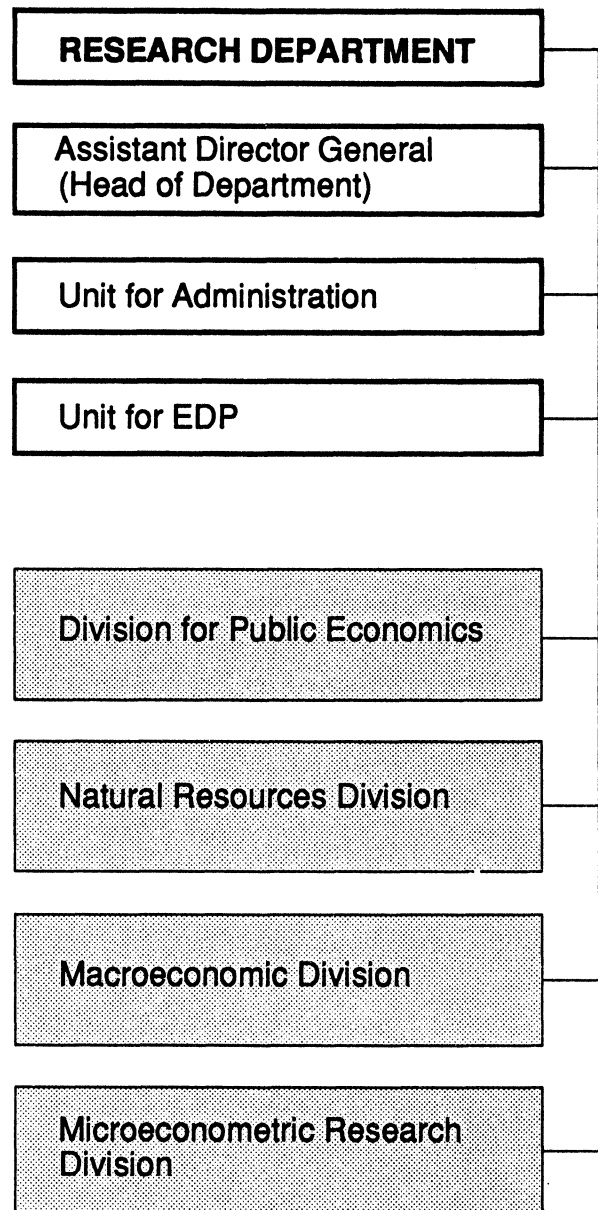
Most of the Research Department's activities are funded via the regular annual budget of CBS, but an increasing share has in recent years come from Norwegian Research Councils and other research contracts. The research contracts are mostly with ministries and other central government institutions.

External contacts - at home and abroad

The general orientation of the Department's work makes Norwegian ministries a particularly important user group. Of particular importance are the ties with the Ministry of Finance and the Ministry of Environment. Also in close contact with the Research Department are the Ministry of Oil and Energy, the Ministry of Children and Family Affairs, the Ministry of Labour and Government Administration and the Ministry of Local Government. With 5-6 other ministries the contacts are more sporadic. It is of importance for these links that the Research Department is - as part of the CBS - embodied in the central government administration.

The Research Department maintain strong international links and take part in several international cooperation projects. Every year the Department receive visitors from throughout the world, from universities, research institutes, and statistical bureaus.

Organization Chart of the Research Department:



Publishing

Research results are reported and published in the following series from the CBS:

Norwegian Official Statistics (NOS)

Social and Economic Studies (SES)

Reports (REP)

Discussion Papers (DP)

Reprint Series

Internal documentation (IN)

The Discussion Papers are all in English. Some of the other publications are in Norwegian with English summary.

In addition, the Research Department publishes the "Økonomiske analyser" ("Economic Survey") with 9 issues a year. The first volume of each year presents an economic review of the past year and is also made available in English. Other issues contain economic surveys both of the Norwegian and the international economic development, quarterly and annual Norwegian national accounts figures with comments and short articles presenting results from ongoing research projects.

Starting from 1991 the Economic Survey will be published also in English with 4-5 issues a year.

Organization

From 1st of February 1991 the administrative structure of the Research Department as well as the CBS as such is

changed.

The main line for the changes has been the creation of larger and more independent divisions within each department. The main part of the administrative tasks has now been decentralized to the departments.

The Research Department is by 1st of February 1991 divided into the following 4 divisions:

Division for Public Economics

Natural Resources Division

Macroeconomic Division

Microeconomic Research Division

The Division for National Accounts was a part of the Research Department in 1990, but will due to the new organization in CBS, belong to the Department of Statistics from February 1991.

The Head of the Research Department, is also Assistant Director General of the CBS. Units for administration and for EDP are organized across divisions.

Management and personnel

The Research Department employs approximately 100 persons, most of them with an academic background. Altogether there are about 50 economists in the Department. Other academic staff represent many disciplines. An incomplete list includes sociology, geography, statistics, computer science, agricultural science, physics, biology and engineering. Most of the non-academic staff are highly trained specialists.

Research and analysis

The research activities of the Central Bureau of Statistics have a general orientation towards developing analytic tools for social planning and political decisions. Emphasis is placed on the development and use of models for analyzing current trends of development

and the effects of alternative policy measures in different areas. Most of the activities related to research and analysis are handled by the Research Department. The Research Department has until 1991 also been responsible for the official statistics of natural resources and related areas. Extensive use is made of the data bases and national accounts of the CBS.

NATURAL RESOURCES AND NATURAL ENVIRONMENT

This area of statistics describes the resource base, extraction, conversion and use of natural resources and the effects the use of natural resources have on environmental conditions as water and air quality. Resource and environmental statistics are partly deduced from different industry statistics, but special statistics are also collected, including some atmospheric emissions, discharges into water and other pollution.

Resource accounts and environmental statistics

The resource accounts link information about natural resources in a system with standard definitions and classifications. In principle, the accounts have the same function for this area of statistics as the national accounts have for economic statistics. The resource accounts are a key source of data for resource and environmental monitoring and provide basic data for resource and environmental analyses. An annual publication provides key figures from the resource accounts and

analyses based on these accounts. A periodic survey publication for environmental statistics provides an overview of data on natural resources, pollution and environmental conditions in Norway along with international comparison of data and analyses of selected subjects concerning natural resources and pollution. The latest compendium on environmental statistics was published at the beginning of 1989.

In 1990, resource accounts for energy, air pollution, and parts of the accounts for fish and forests were updated. The work on resource accounts and environmental statistics will be continued in 1991.

Energy statistics

Energy statistics provide data on prices, production and consumption of energy by different types of energy and different consumer groups. Energy balances are

published annually. In 1991 the publication will be reviewed by the Advisory Committee for Energy Statistics with a

view to improvements. The energy balances will hereafter be prepared quarterly.

Resource and environmental analysis

The aim of this analysis is to improve the basis for resource and environmental policies and to help integrating resource and environmental concerns in economic and other social planning. Work is carried out in the following fields:

Environmental economics

The work in environmental economics has been concentrated on analyses of relationships between economic development, the use of energy and emissions to air. Annual data are published for atmospheric emissions of sulfur dioxide, nitrogen oxides, carbon monoxide, carbon dioxide, volatile organic compounds, lead and particles from more than a hundred economic sectors. The emissions are also specified by municipality.

The historical data form the basis for projections of atmospheric emissions. The projections are based on simulations of the Norwegian economy and assumptions on technological developments, introduction of new cleaning requirements etc. Economic as well as environmental consequences of alternative environmental policies are analyzed, and attempts are made to quantify the costs and benefits of the measures.

In 1990, the work on the SIMEN project (Studies of Industry, Environment and Energy up to the year 2000) was followed up with calculations for the

"interministerial committee on climate change". In these analyses attempts are made to shed light on the possibilities of combining economic growth with some key environmental constraints on air pollution.

Work was continued on quantifying some important benefits related to reduced atmospheric emissions, e.g. reductions in damages to health and damages to nature as a result of reduced air pollution. Effects on traffic-related costs such as traffic accidents, wear and tear on roads, congestion, noise, etc. from measures to reduce the consumption of fossil fuels were also studied. An attempt will be made to include some of these feedback mechanisms, between the economy and changes in the state of the environment in a revised longterm planning model (MSG). These revisions will improve and complete the basis for making decisions on environmental measures. Thus far economists have only modelled the costs of environmental measures.

In 1990, the Central Bureau of Statistics was involved in a number of international environmental projects. The CBS participates actively in a project organized by the United Nations aiming at modelling global economic development and the accompanying use of resources and environmental strains. Moreover, the CBS has contributed to several environmental studies and reports carried out by the Economic Commission for Europe (ECE). This work will be continued in 1991.

Sustainable agriculture

This project is financed by the Ministry of Environment and the State Pollution

Control Authority. The project is carried out in operating with the Agricultural University's research project "Agricultural Policy and Environmental Management". Pilot models have been constructed for calculating nitrogen and phosphorus runoff from agriculture in two limited areas (SIMJAR 1) and for nitrogen runoff for southern Norway (SIMJAR 2).

The models are used to simulate environmental measures such as a reduction/change in the use of fertilizer and changes in the structure of production. Model calculations comprise the effects of the measures on runoff, economic result, production, and employment. In cooperation with Jordforsk, the CBS has in 1990 initiated a project to develop the models further to make it possible to calculate nitrogen-, phosphorus- and soil-losses from agricultural land for larger areas.

Oil and energy

The aim of the work in this field is to provide a theoretical basis for management decisions of Norway's energy resources. The work consists of organizing data and developing models for analyzing the relationships between economic development, energy production, energy consumption and environmental consequences, as well as shedding light on principles for the management of revenues generated by the exploitation of energy resources.

Activities in 1990 have been concentrated on projects sponsored by the research council NORAS (the research programme "Energy and the Society"). The CBS' main project within this programme consists of

further developing the MSG model to improve the analytical capabilities of energy and the environment issues. The new model treats transportation as a separate input factor, and specifies several transport sectors. Power production is partly endogenized, which facilitates analyses of the choice between gas power and hydroelectric power. In addition, alternative specifications of production functions in all sectors of the model have been tested.

Partial analyses have also been made of the demand for energy in households. Special attention has been paid to the relationship between the choice of heating equipment and the consumption of different types of energy. The analysis shows that changes in the relative price of oil and electricity does not necessarily result in a change in the pattern of consumption. This is due to the fact that the choice between different types of energy depends on the type of heating system installed in the household. A new energy survey of households carried out in 1990 will provide a better basis for analyzing such relationships.

As a result of the new Energy Act and the possible introduction of gas power, the Norwegian energy market will become increasingly integrated in an international energy market. At the same time, the focus is increasingly shifting towards the environmental effects of energy production and consumption. This makes it necessary to examine developments in a number of countries simultaneously in order to be able to analyze possible environmental benefits, e.g. from increasing the efficiency of energy markets. Against this background, work was initiated in 1990 to

establish a demand model for 9 European countries. The aim is to develop the model further into an energy market model, where special emphasis will be placed on the description of the Nordic energy market.

Activities within petroleum economics have been reduced substantially after the NORAS programme "Oil and the Society" was scaled down. In 1990, some further work was done on the question on how to

manage the petroleum wealth under uncertainty. This project included model simulations on a simple macroeconomic model (AMEN), in which the price of oil was assumed to be stochastic. Previous analyses of the effects of a deregulation of the European gas market, as a result of "open access" to the gas grid, were followed up. In this project special emphasis has been placed on identifying the cost structure for pipeline transport and energy production in various countries.

NATIONAL ACCOUNTS AND OTHER GENERAL ECONOMIC SUBJECT MATTERS

National accounts in Norway keep to the very principles of the SNA, which consists of a logically consistent and integrated set of macroeconomic data conforming to a set of internationally agreed concepts, definitions, conventions, classifications and accounting rules. More than for most countries, the Norwegian national accounts play a particularly strong role as a key source of information for economic policy, as well as being the most important data base for macroeconomic analysis.

As for the current obligations, national accounts estimates are compiled both on quarterly and annual basis. Throughout the year, quarterly national accounts estimates are compiled with a time lag of two months, except that accumulated four quarters are published twice, first already with one month lag when also applying forecasting technique, second with four months lag including final short-term economic indicators utilized in the

compilation. In addition to these two provisional annual versions based on accumulating quarterly data, two more comprehensive versions of annual national accounts estimates are compiled, one of which is the final version including integrated input-output tables in a rather unusually detailed way internationally speaking.

References:

(i) National Accounts Statistics, a CBS annual publication providing 130 tables containing time-series for a ten-year period, in some cases back to 1930 in 5 year intervals. A selection of international national accounts data is also included. Considerable coverage of technical information (only in Norwegian) provides the reader with useful guidance.

(ii) Economic Analyses, Monthly Bulletin of Statistics and Weekly Bulletin of Statistics are all important series of

publications in which national accounts are regularly published, in particular current quarterly and provisional annual estimates. These also include monthly balance of payments data published by the CBS.

(iii) Also available: unpublished national accounts data for more detailed specifications, including detailed commodity balances (supply and uses). In 1990, a new system was constructed for improved readiness and handling of such detailed requests (input-output data).

An extensive main revision of the national accounts (both system and estimates) was initiated in 1990 and planned for

completion by 1995. A schedule has been drawn up and approved in which one important principle implies the publication of revised estimates as they gradually become available in blocks. In the late phase of the revision, the revised UN recommendations (1993 revised SNA) should be implemented in the Norwegian national accounts. Furthermore, adaptations are being made to conform with the European Integrated System of Economic Accounts (ESA). Moreover, revised activity and product (goods and services) classifications are being integrated with the revised national accounts estimates, based on the ISIC (NACE) and CPC classifications.

ECONOMETRIC METHODS AND ANALYSIS

Econometric analysis of microdata is a main concern for the department and represent a particularly important link between statistics and research. In order to enhance and develop further econometric know-how in the CBS, emphasis is placed on applying and developing theories and methods for estimating behavioural models based on microdata.

As in earlier years work has continued in 1990 on projects related to the analysis of consumption, labour supply, taxes, choice of education and income inequality. In analyses of firm data the efforts have been

concentrated on statistical descriptions of productivity growth and investigation of the relationship between productivity growth and R & D investment. To stimulate the development of econometric methodology, emphasis has been placed on maintaining international contacts, especially with universities in the United States. This has also resulted in joint projects. The Department also encourage members of its staff to increase their qualifications by studying for a doctoral degree in economics. Two people have received their doctoral degree in Economics in 1990.

PUBLIC FINANCE AND LABOUR MARKET RESEARCH

The work on tax estimates and assignments for the Ministry of Finance and the Storting (the Norwegian Parliament) required considerable resources in 1990. Among other things, the change in Government resulted in extensive work for the Storting.

The publications "Current Tax Data" and "Taxes and Transfers to the Private Sector" were updated. In the latter publication we have this year included an annex which deals with the tax bases for calculating personal income taxes. Some new international surveys of the tax treatment of dwellings have been incorporated in "Current Tax Data".

The development of a new software model for use on a personal computer (PC) has now resulted in an operative model. The model has been given the name ODIN. We have started to use the model and trial versions have been supplied to some external users. We have positive experience with the model even though some development work remains before it can fully compete in user friendliness with earlier models for large mainframe computers (primarily KFS). The strength of the new model ODIN is that it covers both taxes and transfers to a greater degree and that it can be operated on a standard PC. The model LOTTE which microsimulates taxes and disposable income for a representative sample of the population is now being used even though we still do not make full use of the model's potential. We are working on improving statistical methods so that the results will be more precise. We are now well under way with

a project that will link the income and capital accounts of the national accounts with the income and tax accounts for households on which LOTTE is based. This work has started by preparing a thorough documentation of concepts and definitions. Our ultimate goal is that it will be possible to impute income concepts in the LOTTE model which are in accordance with national accounts definitions. This will be useful for analyses of income trends.

In the past year the earlier software model for calculating distributional effects of indirect taxes (INSIDENS) has not been operational. We have developed a preliminary calculation programme based on data from the consumer survey in order to satisfy the needs of external users. This will be included in LOTTE as an integrated part of the model in order to be able to microsimulate consumption expenditure for various groups of goods and thereby allow for analyses of distributional effects of different types of individual taxes. The work on an econometric model for saving and financial behaviour has been continued.

The work on studies of corporate taxes has been continued further. We will follow up the empirical analyses that we have made for Norwegian companies' tax behaviour with additional analyses. For this purpose we are in the process of accumulating data which can shed light on the relationship between corporate taxation, dividend policy and the shareholders' income and taxes.

The model MAKKO for local government

finances has been developed further. The model is based on a breakdown of local government activity into sectors which direct their services towards different population groups, children, young people, etc. For each sector variables are estimated which describe how many receive the services (coverage) and the use of resources per client (standard). The model has been used to shed light on the effects of population trends and a change in the age composition, inter alia for the government committee studying care needs. The model will be used together with the macromodels MODAG and MSG.

The work on the microsimulation model for education and job opportunities (MOSART) has now resulted in an operative model. The first projections have been published and presented to users. We have begun work on plans involving a development of this model so that we make full use of the model's capabilities. The expansion on which we are now working covers disability status and income. The model can then be used for simulating both disability pensioners and oldage pensioners. The model will also form the basis for further demographical work on a household model.

The work on an econometric model for labour market bottlenecks, which arise because the distribution of education in the

population does not match the structure of production in the economy, has been continued. The last part of the project, which will continue in 1991, will focus on empirical aspects.

Regional analysis

An important part of the research efforts in the field of regional analysis is covered by the models DRØM and REGION. REGION is a multiregional input-output model, while DRØM is a model system focusing on the relationship between regional labour market balances and interregional migration. In 1990, DRØM was used to calculate coordinated projections of labour market and population trends at the county level. The model REGION was updated with the help of national accounts data by county for 1986. Based on an assignment from the Defence Commission, the data base for the Defence Sector was considerably improved.

The work on a new model project, which is based on a more aggregated analytical framework than REGION/DRØM, was started in 1990. An important aim of this project is to provide a more satisfactory description of the adjustment processes in regional labour markets. The project will provide a starting point for several types of empirical analyses in 1991.

MACROECONOMIC MODELS AND ANALYSIS

The development and use of the macroeconomic models MODAG and KVARTS continued in 1990. The national

budget model MODIS V will no longer be updated and hereafter MODAG will also cover the Ministry of Finance's

requirements previously handled by MODIS. This will provide rationalization benefits for both the CBS and for the Ministry of Finance. KVARTS and MODAG were updated with a new base year as usual, and all econometric parameters were reestimated so that account has been taken of the latest revisions of national accounts data in addition to new observation. All econometric residuals are explicitly represented in the models, and historical figures for these are found in the data banks.

The structure of KVARTS has not changed very much the last few years. For MODAG, on the other hand, a number of new relations have been incorporated in 1990, at the same time the model has been respecified on several points. First, government transfers to households are now generally determined in the model, while they previously had to be estimated by the model user. Secondly, most nominal interest rates have been endogenized so that changes in domestic inflation and the current account result in changes in the Norwegian interest rate level for given foreign interest rates. Thirdly, greater parts of the companies' material inputs are now determined by relations where relative factor prices, capital stock, etc. are included. In this way the treatment of factor demand in the model has become more satisfactory. Fourthly, the treatment of households' consumer demand and housing investment has been entirely changed. Particularly important is the fact that we now have a far more satisfactory model for distinguishing between durable and nondurable consumer goods than was the case with earlier versions of the model. This change is also incorporated in

KVARTS. Minor respecifications in MODAG have primarily been made by reestimating employment relations and investment relations.

In 1990, MODAG has been used internally to evaluate and test the model's properties based on all the changes that have been made in the model the past year. The model has also been used intensively in connection with the so-called KLØKT project. This project, which in some respects is a followup of the SIMEN project in 1989, analyzes measures on a national and international basis to improve climatic conditions nationally and globally. In addition, the model has been used relatively often for smaller consultancy projects for external users where the focus has generally been either mediumterm projections or analyses of changes in economic policy or international conditions.

The KVARTS model is used only by the CBS. In 1990, we have made considerable progress in using the model in connection with the presentation of economic surveys that are published every quarter. The use of the model in connection with the work of the Technical Calculation Committee on the Income Settlements has become a more permanent element than previously and entails that we can now have a continuously updated reference scenario for quarterly developments in the Norwegian economy the next few years. Based on this reference scenario, an impact study of the high oil prices on future price developments was made in September. Through this analysis we determined that the rise in prices would exceed the 4.2 per cent threshold in November which, based on the collective wage agreements for

1990/91, would trigger new wage negotiations. This conclusion proved to be correct and a new round of negotiations were finished in January.

Short-term economic analysis

The programme for and implementation of short-term economic analyses generally followed the same pattern as in 1989 when the programme was revised. In 1990, we succeeded in integrating projections of cyclical movements with the aid of the KVARTS model to a far greater extent than previously. This has long been an ambition in our studies of the economic situation in Norway. In addition, we have obtained a model tool for analyses of cyclical developments in the international economy which we will start using in the period ahead in order to improve the possibilities for linking the Norwegian and international economy. In 1990, we started work on an historical analysis of cyclical developments in the 1970s and 1980s. The aim of the project is, first, to describe the actual course of cyclical movements over a longer period and through this evaluate the suitability of different indicators for such a description. Secondly, we are interested in analyzing the importance of oil activities for cyclical movements in this period, with special emphasis on the direct effects on demand (intermediate consumption and investment) which the growth of this industry has entailed. Thirdly, we want to evaluate the importance of the impetus from cyclical developments internationally in a period involving very turbulent economic conditions on the world market. And, finally, we are interested in investigating to what extent economic policy has had a stabilizing effect on cyclical developments.

The KVARTS model will be used intensively in this study.

Equilibrium models

The work on applied general equilibrium models continued in 1990 with a shift from the development of models to applications. The main project for model applications related to the effects of changes in the system for company and capital taxation on welfare. The section of the project which has studied longterm dynamic effects within an aggregated intertemporal model has been completed and the results are in the process of being published as a doctoral dissertation. The other part of the project is studying to what extent the tax system favours fixed investment over financial investments, as well as whether the system has resulted in overinvestment in some industries and capital types. As part of this work, calculations have been made of how a tax reform based on the Aarbakke Committee's report will affect certain conditions. A necessary component of this work has been to combine a detailed description of the current tax system and the reform proposals with a consistent analytical framework. Two articles dealing with how the tax reform proposals influence the required marginal return on capital before tax have been written. A general equilibrium analysis of the effect of the tax reform on resource allocation and welfare will be documented early in 1991. This analysis will be based on a new version of the MSG model which during the last few years has been developed for analyses of welfare and resource allocation.

At the same time that we began to reap the benefits of the work on capital taxation in

the last half of 1990, the work on endogenizing labour supply was started. The work has proceeded rapidly, and a version of MSG has now been established in which households - divided into 14 groups - endogenously adjust labour supply as a function of, *inter alia*, real wages after tax. This provides opportunities to compare how the socioeconomic costs of an increase in public sector expenditure depend on the type of finance. Such a study is under way and will be completed in the first half of 1991.

Other subjects in the field of tax economics have also been studied. The most widely used general equilibrium models presuppose a negative correlation between the demand for exports and the relationship between domestic and foreign prices. Given the size of the elasticity which is customary in the CBS' models, there is apparently considerable leeway for the authorities to increase national income by imposing levies on exports, especially when export companies themselves do not coordinate their behaviour and make use of the degree of monopoly power they have on a combined basis *vis-a-vis* foreign buyers. This point is very much in evidence in equilibrium analyses of tax changes. The problem is now clarified in an article which is soon to be published.

The work on a new consumption block in the new version of the MSG model has been brought to a preliminary conclusion. The model is considerably more detailed in its description of the relationships between demographic and economic developments as households are now divided into 14 types by sociodemographic characteristics. A separate model was established which, based on the population projections,

projects the number of different types of households. Moreover, we have established a linear expenditure system for each of the 14 household types estimated by cross-sectional data as well as income accounts which distribute the model's various income and expenditure categories among the 14 households in the model. Documentation showing how the changeover from one to 14 households influences the empirical properties of the MSG model was published.

The work on developing a special version of the MSG model for analyzing environmental and energy issues continued in 1990. The project is part of the research programme "Energy and the Society". This model describes the power and transport sector in a more detailed way than the MSG model does today. The work in 1990 generally consisted of establishing the necessary data base. The first operational TROLL version of the model is expected to be ready at the beginning of 1991, but then with a very preliminary empirical content.

In addition to analytical tools for our own research activities, the new version of MSG was used in 1990 in connection with three government studies. First, it was used in the latest KLØKT project to simulate scenarios for the Norwegian economy with and without measures to limit Norwegian carbon dioxide emissions. Secondly, the model was used by the committee studying social care to examine the longterm consequences of changes in the composition of the population. Thirdly, the model was used to compute welfare and allocative effects of different measures aimed at increasing the efficiency of the public sector. All these projects will continue in 1991.

DEMOGRAPHY

The demographic work in the Research Department in 1990 was concentrated on population projection, the Family and Occupation Survey 1988, internal and external migration, and microsimulation of households.

New national and regional population projections were published in the autumn of 1990. Nine different sets were prepared for the period 1990-2050, with alternative assumptions concerning fertility, net immigration and the pattern of domestic migration. Greater emphasis has been placed on trends in cohort fertility and parity than in earlier projections. An evaluation of Norwegian population projections has almost been completed.

A project on the development of methods for analyzing mortality rates for the period 1846-1988 was completed. These methods were used in connection with the projection of mortality in the new population projections. Analysis of family and fertility continued to be given priority in 1990, and this will continue in the years ahead as long as the analysis of data from the Family and Occupational Survey of 1988 is a key task. Data checking and preparations for analysis have required considerable resources in 1990. The first results from the survey were published at

the end of the year and a tabular publication (NOS) with descriptive data was completed. The survey provides new figures on, among other things, the development over the lifetime in cohabitation, marriage, births, education and the occupational careers of women and men.

The increased efforts in recent years to develop files with data on individual histories have provided considerable benefits. So far files have been produced on birth and marriage histories, and the development of a file for migration histories has just been completed. A summary publication with results from the registered studies of fertility is published by the University Press. An extensive analysis of migration histories will begin in 1991. Cooperation on the development of a microsimulation model for households continued (MOSART).

Considerable attention has been devoted to demographic aspects of immigration and emigration, inter alia, through participation in the OECD's group for this (SOPEMI) and the European Science Foundation. The CBS also cooperates with international organizations concerning fertility surveys in Europe, fertility among cohabiting couples, consequences of population trends for social security expenditures, etc.

LIST OF PERSONS EMPLOYED IN THE RESEARCH DEPARTMENT AS OF 1 FEBRUARY 1991

Head of Department

Bjerkholt, Olav

Unit for Administration

Finstad, Hanne, Head of Administration
 Angeland, Kirsti, Office Secretary
 Holm, Elisa, Office Secretary
 Lysell, Kari Anne, Office Secretary
 Rambøl, Hanne, Executive Officer
 Skoglund, Anne, Junior Executive Officer
 Vonheim, May Synnøve, Senior Clerk

Unit for EDP

Vatne, Bjørn Helge, Head of Division

Division for Public Economics

Ljones, Olav, Director of Research
 Andreassen, Leif, Research Economist
 Fjærli, Erik, Research Economist
 Fredriksen, Dennis F., Research Economist
 Gabrielsen, Inger, Adviser
 Hansen, André H., Junior Executive Officer
 Hansen, Kirsten, Senior Executive Officer
 Ivås, Eva, Executive Officer
 Koren, Charlotte, Research Fellow
 Kornstad, Tom, Research Economist
 Langbraaten, Nina, Research Economist
 Li, Jing, Junior Executive Officer
 Moe, Ann Synnøve, Senior Clerk
 Skoglund, Tor, Research Fellow
 Stambøl, Lasse L., Research Demographer
 Sørensen, Knut Ø., Research Fellow
 Aamdal, Kyrre, Research Economist

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 Andersen, Kirsten, Senior Clerk
 Aslaksen, Iulie, Research Fellow
 Bartlett, Sarita, Research Economist
 Birkelund, Hugo, Research Economist
 Brekke, Kjell Arne, Research Fellow
 Brendemoen, Anne, Research Economist
 Bye, Torstein, Senior Research Fellow
 Fuglestad, Jan, Research Economist
 Gjelsvik, Eystein, Research Fellow
 Glomsrød, Solveig, Research Fellow
 Hansen, Mona Irene, Executive Officer
 Johnsen, Tor Arnt, Research Economist
 Johnsen, Torgeir, Research Economist
 Lurås, Hilde, Research Economist
 Mysen, Hans Terje, Research Economist
 Nesbakken, Runa, Research Economist
 Nyborg, Karine, Research Economist
 Strandli, Anne, Executive Officer
 Thorvik, Erik, Research Economist
 Torvanger, Asbjørn, Research Economist
 Aaheim, Asbjørn, Research Fellow
 Aaserud, Morten, Research Economist

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Bowitz, Einar, Planning Officer
Bye, Brita, Research Economist
Drzwi, Ann-Christin, Senior Clerk
Drzwi, Wenche, Executive Officer
Eika, Torbjørn, Research Economist
Holm, Inger, Senior Executive Officer
Holmøy, Erling, Research Fellow
Holtmark, Bjart, Research Economist
Hove, Stein Inge, Research Economist
Haakonsen, Laila, Junior Executive Officer
Jore, Anne Sofie, Research Economist
Lerskau, Lisbeth, Executive Officer
Lindquist, Kjersti-Gro, Research Economist
Magnussen, Knut, Research Economist
Mathiesen, Christine M., Senior Clerk
Moum, Knut, Research Fellow
Naug, Bjørn, Research Economist
Offerdal, Erik, Research Fellow
Olsen, Øystein, Director of Research
Skjerpen, Terje, Research Economist
Storm, Erik, Research Economist
Strøm, Birger, Executive Officer
Stølen, Nils Martin, Research Fellow
Svendsen, Ingvild, Research Economist
Swensen, Anders Rygh, Senior Research Fellow
Thonstad, Knut, Research Economist
Vennemo, Haakon, Research Economist

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Dagsvik, John, Director of Research
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Kim, Tae Huyn, Research Economist
Klette, Tor Jakob, Research Fellow
Wennemo, Tom, Senior Executive Officer
Aaberge, Rolf, Senior Research Fellow
Aasness, Jørgen, Research Fellow

Publications issued in 1990

DP	= Discussion Papers (in English only)
NOS	= Norway's Official Statistics
RAPP (REP)	= Rapporter (Reports)
REPRINT	= Reprint Series
SØS (SES)	= Sosiale og økonomiske studier (Social and Economic Studies)
ØA	= Økonomiske analyser (Economic Surveys)
IN	= Interne notater (Internal Documentation)

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DP	49	Aasness, Jørgen Properties of demand functions for linear consumption aggregates
DP	50	Leon de, Jose-Gomez Empirical EDA Models to Fit and Project Time Series of Age-Specific Mortality Rates
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DP	53	Aaberge, Rolf; John K. Dagsvik and Steinar Strøm Labor supply, income distribution and excess burden of personal income taxation in Sweden
DP	54	Aaberge, Rolf; John K. Dagsvik and Steinar Strøm Labor supply, income distribution and excess burden of personal income taxation in Norway
DP	55	Vennemo, Haakon Optimal taxation in applied general equilibrium models adopting the Armington assumption

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- NOS B934 **Nasjonalregnskapsstatistikk 1988 (National Account Statistics 1988)**
- RAPP 1 **Naturressurser og miljø 1989**
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- RAPP 2 **Sørensen, Knut Ø. and Jøran Toresen**
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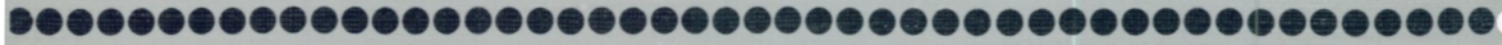
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