

Economic Survey

4/96

Economic trends

- National accounts for 3 quarter 1996
- Overview of international and Norwegian economic development in 1996 and outlook for the next two years

Articles

- Expectations in the Norwegian economy
- General government finances in Norway

Economic Survey

Volume 6

4/96

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Economic trends

Preliminary national accounts figures for the third quarter of 1996 show a brisk rise in output and demand following more moderate growth in the previous quarter. Total GDP is projected to expand at an annual rate of 4.8 per cent, noticeably stronger than in 1995 and almost on a par with the level in 1994. The contribution from oil and gas production to GDP growth, however, is substantially greater in 1996 than in 1994 and 1995. Output and demand from mainland Norway appear to be expanding at about the same pace as last year. True, the growth impetus from private and public consumption will be appreciably stronger this year, but the contribution from mainland fixed investment will probably be considerably less. The brisk rise in household demand this year is particularly related to car purchases. In isolation, this results in higher imports and higher general government revenues, but does not impart a strong stimulus to Norwegian production. Buoyant growth in exports to countries in Asia and eastern Europe is contributing to stronger growth impulses from traditional merchandise exports in 1996 than last year.

Employment growth is set to rise sharply this year, but so far this has been accompanied by an increase in the labour force of almost the same magnitude. Unemployment will probably fall by half a percentage point, approximately the same as in the previous two years. Improved profitability in some business sectors in 1996 is resulting in high wage growth this year. With price inflation at 1.3 per cent this year, the lowest since 1960, the rise in real wages will be the strongest in many years. High oil prices and vigorous growth in exports of oil and gas will translate into very large surpluses on both the current account and government budgets.

Even though many European countries are conducting a tight fiscal policy, Norway's main trading partners are ex-

Main indicators for the Norwegian economy

Growth from previous year. Per cent

	1995	1996	1997
GDP	3.3	4.8	3.0
- mainland Norway	2.7	3.1	2.7
Consumption in households and non-profit organizations	2.6	4.3	2.5
Unemployment rate ¹⁾	4.9	4.4	4.0
Consumer price index	2.4	1.3	2.3

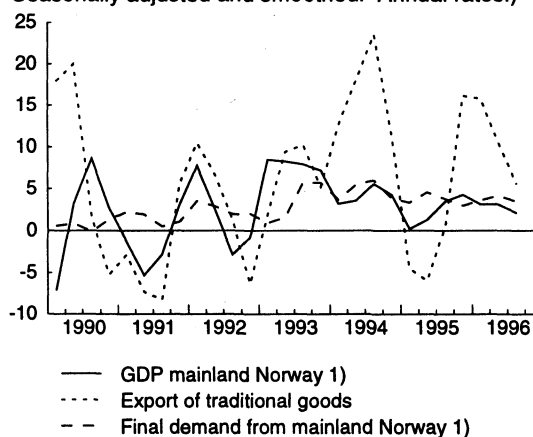
1) Level in per cent.

pected to record moderately higher growth next year. In the absence of continued sharp growth in exports to countries in Asia and eastern Europe, however, the impetus from traditional merchandise exports may be weaker than in 1996. The contribution to growth from total consumption and mainland fixed investment is also expected to taper off from 1995 to 1996, whereas oil investment will increase. As a result of somewhat lower growth in demand, output in mainland industries is likely to rise more slowly next year. Developments in oil and gas production also point to more moderate growth in total GDP in 1997 than in 1996. Further gains in employment may reduce the unemployment rate to about 4 per cent next year, but wage growth is expected to decline as a result of weaker profitability in industry and commerce. In spite of a projected reduction in oil prices, the surpluses on the current account and general government budgets are expected to remain high.

The projections for developments in the Norwegian economy in 1997 presuppose that fiscal policy does not become substantially more expansionary than assumed in the final budget bill. There is also some uncertainty attached to how households will respond to the recent decline in interest rates in a situation where their financial leeway is relatively ample. The substantial current-account surplus may continue to create tensions next year between the objective of a stable krone exchange rate and interest rates that are adapted to the cyclical situation in the mainland economy.

Cyclical development

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



1) Excl. oil and ocean transport.
Source: Statistics Norway.

International economy

It appears that 1996 will be a cyclically sluggish year for continental European countries. This must be seen in conjunction with the tight fiscal policy being conducted and high real interest rates, which are curbing domestic demand in some large European countries. During the autumn there were some signs of improvement, particularly in France and Germany, whereas the economic situation in Italy has been weaker than projected at the beginning of 1996. In Sweden and Denmark, high growth in real wages this year points to a rise in domestic demand in the period ahead, and the forecasts now indicate GDP growth of close to 3 per cent in both countries in 1997. The US is likely to record continued moderate economic growth next year. Following a slump which persisted for several years, Japan is set to record a sharp rise in GDP this year. However, the growth rate will probably slow substantially in 1997 as a result of fiscal retrenchment.

GDP in *Germany* expanded by 0.3 per cent from the second half of 1995 to the first half of 1996. Growth was primarily fuelled by household consumption, stimulated in part by tax reliefs, as well as investment in machinery and higher net exports. Output rose by 1 per cent in the third quarter, according to preliminary national accounts figures. Confidence surveys also indicate greater optimism in the business sector, most likely as a result of a moderate wage settlement and a decline in interest rates. Against this background, GDP growth is expected to pick up markedly in 1997. Unemployment, however, continues to edge up and will probably reach 11 per cent of the labour force next year. In *France*, GDP expanded by 0.7 per cent between the latter half of 1995 and the first half of 1996, primarily as a result of a rise in household consumption and growing net exports. Preliminary national accounts figures show that growth picked up further in the third quarter. The expansion particularly reflected a temporary policy stimulus for higher car purchases, but investment also increased considerably. However, the recently concluded 12-day strike in the transport sector will contribute to curbing activity in the fourth quarter. GDP is projected to rise by 2.5 per cent next year. Unemployment stands at around 12.5 per cent and is expected to remain at this level in 1997.

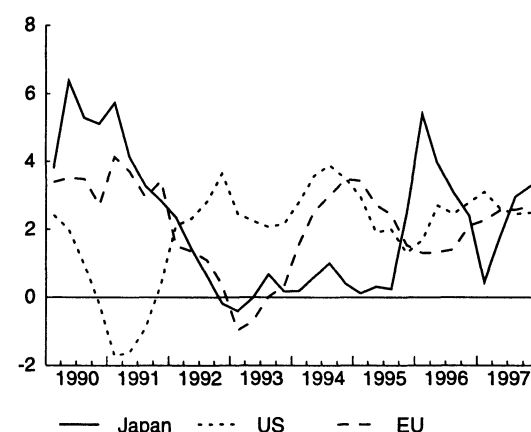
In the *UK*, GDP grew by 1.1 per cent from the latter half of 1995 to the first half of 1996, primarily underpinned by household consumption and investment. There are clear signs that the rise in consumption will continue, a development which must be seen in conjunction with stronger wage growth and higher household wealth. Unemployment, which continues to decline, is expected to fall below 7 per cent next year, while GDP growth may reach 3 1/2 per cent. *Italy* recorded a pronounced decline in output in the first half of 1996, and GDP was 0.3 per cent lower than in the second half of 1995. The decline is primarily ascribable to a sluggish trend in domestic demand combined with lower export growth in the wake of an appreciation of the

lira. Output grew by 0.5 per cent from the second to third quarter. The forecasts for growth have recently been revised downwards substantially, and GDP is likely to expand by less than 1 per cent in 1996.

In *Sweden*, revised national accounts figures show an upward revision of GDP growth in 1995 from 3.0 to 3.6 per cent. The revision primarily relates to household consumption, which was higher than assumed earlier. 1995 was thus a peak year for Sweden. Preliminary figures for the first half of 1996 indicate a slowdown in the growth rate; GDP expanded by 1.5 per cent from the same period one year earlier. Public and private consumption exhibited a sluggish trend, whereas net exports and private investment made a positive contribution. A stronger krona and sharp rise in manufacturing industry's costs will probably result in weaker export growth in the period ahead. As a result of high nominal pay increases combined with subdued inflation, domestic demand is expected to generate a stronger growth impetus next year. A sharp drop in interest rates is also expected to provide some stimulus to growth, and the forecasts point to a rise in GDP of nearly 3 per cent in 1997. In *Denmark*, preliminary national accounts figures show that GDP expanded by 1 per cent from the first to second quarter of 1996. As a result of a strong growth in wages, the rise in consumption is expected to continue, whereas investment will probably grow at a somewhat slower pace in 1997 than this year. Increased activity in the oil and gas sector, however, may contribute to a rise in GDP of more than 3 per cent in 1997.

Preliminary national accounts figures show that GDP in the *US* expanded by 2 per cent (s.a.a.r) in the third quarter of 1996 following growth of 4.7 per cent in the second quarter. Private investment in machinery and equipment as well as inventory accumulation made the greatest contribu-

GDP-growth in US, Japan and EU (per cent)
Measured from the same quarter the previous year



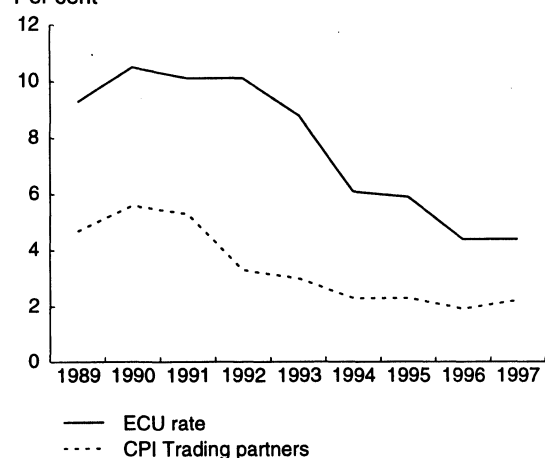
Sources: NIESR and Statistics Norway.

tion to growth, whereas both public and private consumption exhibited a relatively sluggish trend. Short-term data indicate that growth will pick up slightly in the fourth quarter, and for 1996 as a whole GDP is projected to rise by 2.4 per cent. The main driving force in economic activity in the period ahead will probably be household consumption, while the growth rate in other GDP components will most likely remain at the same level as this year. All in all, GDP growth in 1997 is projected to be slightly higher than in 1996.

Following GDP growth of 12.2 per cent (s.a.a.r.) in the first quarter, preliminary national accounts figures for *Japan* show that output dropped by 2.9 per cent in the second quarter. The strongest negative contribution came from public consumption as well as public investment. This must be viewed in conjunction with the waning effect of the large economic stimulus packages launched by the Japanese authorities during the recession. Net exports also declined, while private investment in machinery and equipment, and particularly in dwellings, rose sharply in the second quarter. Developments in the first half of 1996 point to total GDP growth of a little more than 3 1/2 per cent in 1996. It is unlikely that private domestic demand will be able to compensate for the absence of stimulus from the public sector when the special measures are scaled back. In addition to the direct impact of the elimination of the economic stimulus packages, the Government plans to raise taxes next year, which will curb growth in household consumption. GDP is thus likely to expand by a little more than 2 per cent in 1997.

The forecasts indicate that *price inflation* among Norway's main trading partners will be a little more than 2 per cent in 1997, slightly above the rate recorded this year. In European countries, the low level of activity and high unemployment are generally contributing to very moderate inflation, with the projections for the rise in consumer prices ranging between 1.5 and 2.5 per cent for most countries. One exception is Italy where consumer price inflation has

3 month ECU rate and growth in consumer prices for Norway's trading partners
Per cent



Source: Statistics Norway.

Economic forecasts for Norway's main trading partners

Annual per cent change

	1995	1996	1997
USA			
GDP	2.0	2.4	2.7
Private consumption deflator	2.3	2.4	2.5
Short term interest rate (level)	5.9	5.3	5.6
General government budget deficit ¹⁾	-1.9	-1.4	-1.5
Japan			
GDP	0.9	3.7	2.1
Private consumption deflator	-0.4	0.3	1.3
Short term interest rate (level)	1.2	0.6	1.1
General government budget deficit ¹⁾	-3.9	-4.9	-3.7
Germany			
GDP	1.9	1.2	2.3
Private consumption deflator	2.0	1.8	1.8
Short term interest rate (level)	4.5	3.3	3.3
General government budget deficit ¹⁾	-3.5	-4.2	-3.0
France			
GDP	2.2	1.3	2.6
Private consumption deflator	1.7	1.9	2.2
Short term interest rate (level)	6.6	3.9	3.6
General government budget deficit ¹⁾	-5.0	-4.2	-2.9
United Kingdom			
GDP	2.5	2.2	3.6
Private consumption deflator	3.4	2.8	3.0
Short term interest rate (level)	6.7	6.0	6.0
General government budget deficit ¹⁾	-5.5	-4.4	-3.0
Italy			
GDP	3.0	0.7	1.6
Private consumption deflator	5.4	4.6	3.7
Short term interest rate (level)	9.0	7.4	6.7
General government budget deficit ¹⁾	-7.2	-7.2	-4.4
Sweden			
GDP	3.6	1.7	2.9
Consumer price index	2.9	0.8	1.2
Short term interest rate (level)	8.8	5.9	4.6
General government budget deficit ¹⁾	-7.8	-2.5	-1.6
Denmark			
GDP	2.8	2.0	3.1
Consumer price index	2.1	2.1	2.3
Short term interest rate (level)	8.3	7.3	7.5
General government budget deficit ¹⁾	-1.6	-1.5	-0.3
The Netherlands			
GDP	2.1	2.6	2.6
Private consumption deflator	2.0	1.9	2.3
Short term interest rate (level)	4.4	3.0	3.0
General government budget deficit ¹⁾	-4.0	-2.9	-2.0
Memo			
GDP trading partners	2.4	1.7	2.6
Consumer prices trading partners	2.3	1.9	2.2
ECU interest rate	5.9	4.4	4.4

1) Per cent of GDP.

Source: NIESR and calculations by Statistics Norway. National sources for Sweden and Denmark.

Effects of the rise in share prices on the US economy

Share prices in the US have risen substantially over the past two years. The percentage rise in share prices is on a par with the level seen in earlier expansions. It has been asserted that the stock market has a greater impact on economic developments in the US than in other countries and that any sharp fall in prices might have considerable macroeconomic effects. With the help of counterfactual calculations using the macroeconometric model NIGEM¹, we have attempted to estimate the effect of the rise in share prices on economic developments in the US in 1995 and 1996.

The analysis is based on a version of NIGEM in which share prices are determined outside the model. A (linear) trend is constructed for share prices based on actual price movements in the period from the first quarter of 1984 to the fourth quarter of 1994, see figure. If this trend is extended, we find that observed share prices in the third quarter of this year were more than 25 per cent above the historical trend. By letting share prices follow the historical trend through 1995 and 1996, the calculations show that GDP growth for these two years would have been 0.2 and 0.7 percentage point, respectively, lower than the actual observations. With the historical trend as a reference, the sharp

Effect of the rise in share prices on the US economy. Change in growth rates in percentage points unless otherwise indicated

	1995	1996 ¹⁾
Share prices ²⁾	11.2	13.7
Private consumption	0.4	1.2
Housing investment	-0.1	-0.9
Private investment, excl. housing	0.1	0.3
GDP	0.2	0.7
Short term interest rates (change in level)	0.1	0.3
Consumption deflator	0.1	0.9

1) Estimates for fourth quarter of 1996.

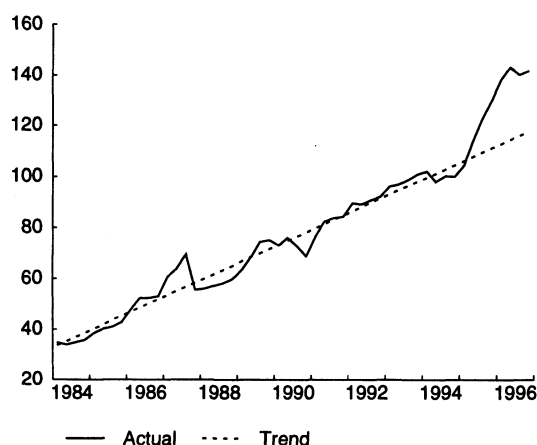
2) Deviation from the trend in per cent.

rise in share prices through 1995 and 1996 has thus, according to our calculations, contributed to raising the level of GDP in 1996 by about one percentage point.

It is primarily private consumption that is influenced by share prices through changes in the value of household financial wealth. As the table shows, the rise in share prices has, according to our calculations, contributed to boosting consumption growth by 0.4 percentage point in 1995 and by 1.2 percentage points in 1996. The expansion in economic activity, however, has resulted in a tighter monetary policy, and the calculations indicate that short-term interest rates have risen by 0.4 percentage point as a result of the increase in share prices. This has had a negative impact on housing investment, while other private investment, which according to the model is influenced by both long-term interest rates and production, has risen. Higher economic activity has also resulted in a faster rise in consumer prices than would otherwise have been the case.

¹ NIGEM (National Institute Global Econometric Model) is a macro-econometric global model developed by the National Institute of Economic and Social Research (NIESR) in London.

Share prices in the US
Index, 1994 = 100



Sources: NIESR and Statistics Norway.

been relatively high. However, the inflation rate in Italy has drifted down by about 2 1/2 percentage points during 1996 to a 12-month rise of 3.0 per cent in October. The average rise in prices in Italy will thus be reduced to less than 4 per cent in 1996, with a further decline expected for 1997. One uncertain factor is wage growth which may pick up slightly following two years of declining real wages. The UK differs from continental European countries in that the inflation rate appears to be moving up. In October, the 12-month rise in prices (excluding interest payments) was 3.3 per cent, and this was the highest rate of inflation recorded since September 1993. In Sweden, the VAT rate on food was reduced from 21 to 12 per cent from 1 January 1996, resulting in a decline in the inflation rate. Lower interest rates and falling import prices as a result of a stronger krona have contributed to a further drop in consumer prices, with the consumer price index showing a decline in October compared with the same month one year earlier. An increase in indirect taxes, including a high-

her property tax, may push up the inflation rate to 2 per cent next year. Inflation in the US still shows few signs of quickening. As a result of historically low unemployment (5.4 per cent in November), many analysts have feared higher wage growth. Available statistics for the first three quarters indicate, however, that total hourly labour costs only rose by a little less than 3 per cent, and the year-on-year rise in the consumer price index was 3.0 per cent in October. Price inflation is expected to edge up next year as a result of the continued expansion in economic activity. Japan has recorded falling prices; in the first ten months of 1996 prices were 0.1 per cent lower than in the same period last year. The planned increase in the consumption tax in April next year will probably result in a higher rate of inflation in 1997.

As a result of lower economic activity in continental Europe, *monetary policy* has gradually become more expansionary over the past year. In Germany, the central bank lowe-

Effects of higher oil prices on the international economy

Crude oil prices have risen substantially in 1996 and are now about 20 per cent higher than the level recorded six months ago. It is uncertain whether the high level of prices will be sustained; among other things, Iraq's possible sales of crude oil may contribute to lower prices. If prices remain high over a longer period, one of the consequences will be higher consumer prices internationally, which will also affect Norway's import prices. Higher crude oil prices will also have an impact on economic growth among our trading partners. In order to comment on the magnitude of the effects of persistently higher oil prices, we have made some calculations using the macroeconomic model NIGEM¹. In

Effect of higher oil prices on the growth in GDP and consumer prices. Percentage points

	GDP		Consumer prices	
	1997	1998	1997	1998
USA	-0.2	0.0	0.6	0.3
Japan	-0.1	-0.1	0.3	0.1
Germany	-0.1	-0.1	0.2	0.1
France	0.0	-0.1	0.2	0.2
United Kingdom	0.0	0.0	0.2	0.2
Italy	0.0	0.0	0.3	0.2

the model, the effects of higher oil prices are spread through import and export prices to domestic prices and the real economy. The effects will normally vary between countries as a result of differences in oil dependence, differences in how the price effects influence the real economy and to what extent the countries trade with OPEC and other oil producers. For a further documentation of oil price effects for Germany, Japan and the US, see Barrell and Magnussen (1996).

We start with an increase in oil prices of 20 per cent in the period from the third quarter of 1996 to the end of 1998 in relation to a reference path. The model-based results for the major OECD countries show that the rise in consumer prices in 1997 will be from 0.2 to 0.6 percentage point higher than it would have been without an increase in oil prices, while the effects in 1998 vary between 0.1 and 0.3 percentage point. The effects are greatest in the US and smallest in Germany. GDP remains unchanged in the UK and in Italy, but is reduced by between 0.1 and 0.2 percentage point in the other countries.

Reference

Barrell, R. and K.A. Magnussen (1996): Counterfactual analysis of oil price shocks using a world model. Discussion Papers no. 177, Statistics Norway.

¹ NIGEM (National Institute Global Econometric Model) is a macro-econometric global model developed by the National Institute of Economic and Social Research (NIESR) in London.

red its discount and Lombard rates by half a percentage point in April this year, to 2.5 and 4.5 per cent respectively. The repo rate, however, was not reduced until August, from 3.3 to 3.0 per cent. The latest interest rate cut was implemented even though money supply growth exceeded the target range. However, money supply growth was slowing, inflation was low and the economic recovery was hesitant. In France, the central bank quickly followed suit, lowering its intervention rate by 0.2 percentage point to 3.35 per cent. France thus continued its strategy of gradually lowering its official rates. Over the past year the intervention rate has been reduced by altogether 1.1 percentage points. Long-term rates have also fallen and are now on a par with German rates, which may indicate that market participants expect the two countries to participate in the planned monetary union. In Italy, the central bank's interest rate was unchanged from April 1995 until August this year when favourable inflation figures resulted in a reduction of 0.75 percentage point in the discount rate, to 8.25 per cent. This rate was reduced further to 7.5 per cent in October. Short-term market rates have declined by nearly 3 percentage points over the past eighteen months. The central bank in Sweden has cut its repo rate a number of times since the beginning of 1996, most recently to 4.35 per cent on 26 November. The interest-rate cuts must be viewed in connection with the central bank's inflation target (of 1-3 per cent) and the substantial decline in the inflation rate since last autumn. Money market rates in Sweden have fallen by about 3 3/4 percentage points thus far this year. In the UK, base rates were reduced on four occasions (each by 0.25 percentage point) between December 1995 and June 1996,

when the rate stood at 5.75 per cent. In conjunction with the rise in the inflation rate in recent months, however, the base rates was raised to 6 per cent at the end of October. Even though nominal short-term interest rates are now very low in Europe, real interest rates (particularly long-term) are still at an historically high level as a result of the low level of inflation.

The US Federal funds rate has been reduced three times since July last year, most recently to 5.25 per cent in January 1996. In the wake of low inflation, we expect the funds rate to remain at its current level until after the turn of the year. The prospect of a further expansion in economic activity, however, indicates that the Federal Reserve will conduct a tighter monetary policy in the period ahead, and short-term rates are likely to rise in 1997. In Japan, the economic slump over the last few years has been met with gradual reductions in the discount rate, most recently to a record-low of 0.5 per cent in September 1995. The recovery this year is primarily being fuelled by government measures, and the central bank is not expected to tighten policy until the upturn is firmly entrenched in the private sector.

Fiscal policy in Europe is largely focused on satisfying the convergence criteria in the Maastricht treaty, thereby paving the way for economic and monetary union. Sluggish economic trends the past year have made it more difficult than expected to satisfy the budget requirement by the deadline and several countries have therefore tightened fiscal policy. In Germany, the government budget deficit in 1995 was equivalent to 3.5 per cent of GDP, and this year go-

vernment finances have deteriorated as a result of lower tax revenues and higher social security payments. The Government's budget proposal for 1997 contained a number of proposals to curb public spending. All in all, the package entailed a reduction in expenditure of DM 66.5 billion, distributed as 25 billion at both the federal and local level and 16.5 billion on the social security budget. Altogether, the tightening is equivalent to 1.8 per cent of GDP. The measures have been approved by the Bundestag, but there is some uncertainty as to whether the cuts will be implemented at the *länder* level. In France, the budget deficit last year was equivalent to 5 per cent of GDP. Fiscal policy has been tightened since last summer, both in the form of tax hikes and spending cuts. Further austerity measures are proposed in the budget for 1997, including higher social security taxes and an increase in petrol, tobacco and alcohol taxes. Pension funds have also been transferred from state enterprises that are to be privatized to the central government in order to increase budget revenues. These one-off transfers are estimated to amount to about 0.5 per cent of GDP. The forecasts indicate that France will record a general government deficit of about 3 per cent of GDP in 1997, and thus satisfy one of the most important criteria for EMU membership. The budget deficit in the UK also appears to have been reduced substantially this year even though tax revenues have been lower than expected. The recently presented budget for 1997 calls for government spending cuts of about NKr 70 billion. The budget deficit is expected to be less than 3 per cent of GDP next year in spite of the country's opt-out protocol regarding EMU participation. In Italy, the administration has proposed an ambitious budget for 1997 with tighter fiscal measures amounting to L 62.5 trillion. If all the measures are introduced, the budget deficit will be reduced to about 3 per cent of GDP. About two thirds of the tightening is expected to be reflected in lower spending, partly through cuts in transfers to the local authorities. Higher government revenues will account for the remainder, in the form of a temporary "euro tax" and "accounting measures". Doubt has been raised, however, as to whether it will be possible to implement this since the plans for the "euro tax" have created internal dissension in the coalition government. Moreover, the tight fiscal policy will probably result in lower GDP growth than assumed in the budget. In Sweden, the authorities have been tightening policy for several years, and this has contributed to a considerable improvement in government finances. The budget deficit is expected to shrink from about 4 per cent of GDP this year to less than 2 per cent in 1997. Even though the general government gross debt is still relatively high (about 85 per cent of GDP), this means that Sweden will probably be eligible to participate in the planned monetary union if it so desires.

Fiscal policy in the US continues to be tightened. As a result of higher-than-expected tax revenues, partly reflecting a pronounced growth in capital gains taxes, the federal budget deficit for this fiscal year came to \$ 107 billion, or about 1.4 per cent of GDP. The forecasts for next year indicate a slightly higher deficit, entailing that further cuts are necessary if the goal of a balanced budget in the year 2002 is

to be achieved. Japan's budget balance has deteriorated substantially as a result of the many economic stimulus packages launched by the authorities during the protracted recession. The authorities are expected to tighten fiscal policy and have announced that the consumption tax will be increased from 3 to 5 per cent in April 1997 and the special income tax deduction (introduced in 1994) will be removed. Further measures other than those already planned are probably necessary to prevent Japan's general government net debt (of about 10 per cent of GDP) from rising dramatically in the long run.

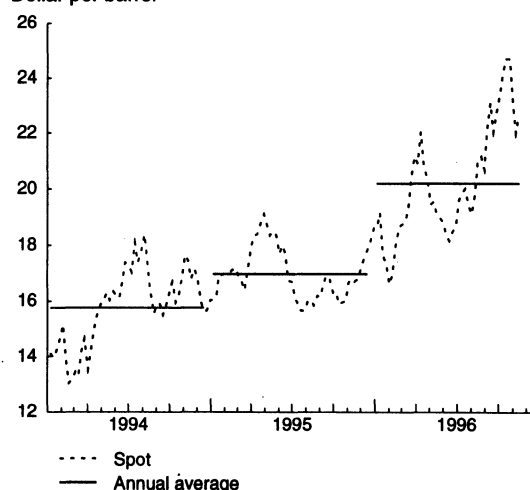
The oil market

The spot price of Brent Blend was quoted at more than \$ 25 p/b at the beginning of December, the highest level recorded since the Gulf war at the beginning of the 1990s. As an average for the first eleven months of the year, the spot price of Brent Blend was \$ 20.4, or NKr 131.4 p/b.

The rise in oil prices this year was triggered by several factors. The winter of 1995/1996 was very cold and resulted in a sharp reduction in oil stocks. In line with earlier patterns of consumption, oil stocks were rebuilt through the second and third quarter of 1996. The build-up of stocks, however, was lower than anticipated as a result of a smaller-than-expected increase in production from non-OPEC countries. Oil supplies for future consumption from stock levels in November are thus the lowest in ten years. Uncertainty concerning Iraq's market re-entry has also resulted in a nervous and tight market, with relatively wide price fluctuations.

At the end of November it was announced that Iraq would be permitted to resume limited oil exports from December. The agreement allows Iraq to export oil for about \$ 2 billion over a period of six months, entailing daily exports of 0.6-0.8 million barrels. The announcement was made just before the OPEC Ministers' 101st ordinary meeting of

Spot price, Brent Blend 1994-1996
Dollar per barrel



Source: Petroleum Intelligence Weekly.

members in Vienna, which began on 26 November. At the meeting it was decided that OPEC would maintain its self-imposed production quotas at 25.03 million b/d. Some member countries, however, produce considerably more than the quota permits, entailing that OPEC today produces about 26 million b/d. Iraqi exports will come in addition to the other member countries' production. It is assumed, however, that the go-ahead for oil exports from Iraq may reduce the willingness on the part of other member countries to comply with the decision on production limitations.

When the announcement was made that Iraq had accepted all the UN's terms for oil sales, oil prices fell by more than \$ 1 p/b. Prices rebounded swiftly, however. The market's cautious reaction must be viewed in the light of the uncertainty concerning the agreement. Prices dropped to about \$22 1/2 p/b when the agreement actually took effect on 10 December. The forecasts point to oil prices at about the current level until the end of the year, but prices may edge up during the winter. Price trends, however, are uncertain since they partly depend on winter temperatures.

Other commodity markets

After peaking in the summer of 1995, prices of commodities, excluding energy, have moved on a downward trend, a development which must be viewed in connection with cyclical weakness in Europe. According to the German HWWA institute, commodity prices (excluding energy) fell by 12 per cent in the year to October 1996. Preliminary figures for November, however, indicate that prices have levelled off. AIECE expects relatively stable prices in the months ahead for most commodities. Robust growth in Japan and a new economic upturn in Europe may, however, contribute to a rise in the prices of iron and steel, whereas a decline is expected for food and beverages.

After the Sumitomo scandal triggered a sharp fall in copper prices around mid-year, other metal prices have also

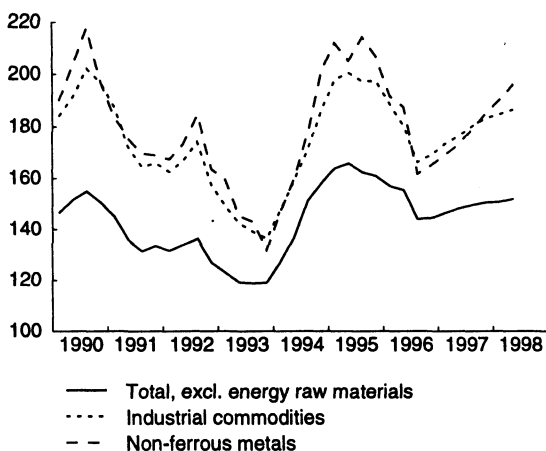
declined through the autumn. Aluminium prices dropped considerably from mid-September, probably as a result of a meeting among the world's aluminium producers. Falling production from the former Soviet Union and the prospect of higher demand in Europe point to better balance in the market in the period ahead, and AIECE expects prices to climb moderately next year. Weaker demand for steel, both in Japan and in western Europe, has contributed to lower nickel prices. Expectations of higher consumption next year, however, may boost prices again. Zinc and tin prices have shown little change from 1995 to 1996, whereas lead prices have risen considerably as a result of high demand for batteries. All in all, AIECE expects no rise in the prices of non-ferrous metals from 1996 to 1997.

A sharp increase in steel production last year, without a corresponding growth in demand, has resulted in a fairly sluggish price trend for steel. Following a 3 per cent rise in prices last year, prices are likely to remain unchanged this year. Output has fallen slightly in 1996, and there are signs of rising demand from both Europe and China. A slight increase in prices next year thus seems possible. The prices of scrap iron have increased substantially in 1996, reflecting strong demand. AIECE also expects prices of both iron ore and magnesium to rise moderately next year.

The prices of farm-based industrial commodities fell by about 20 per cent up to October this year. After peaking at \$ 1000 per tonne in October last year, pulp prices have dropped by 50 per cent from December 1995 to April 1996. During the summer and autumn price movements were unclear, but the turnaround to growth in manufacturing production in the OECD area should imply greater demand and thus slightly higher prices in the period ahead. Capacity expansions in Asia point to the opposite trend. Prices of wood products have also fallen considerably the last two years, primarily as a result of low activity in residential construction in Germany, the UK and France. Continued high long-term interest rates entail that the future outlook is relatively weak, possibly with the exception of the UK which is the largest market for wood products in Europe.

After rising in the first half of 1996, prices of food and beverages have edged down through the autumn. This particularly reflects movements in grain prices, which rose sharply in the first half of the year as a result of difficult weather conditions, including a drought in the US. After the weather situation improved, the prices of barley, maize and wheat resumed a downward trend. A further decline in prices is expected through the remainder of 1996 and into 1997. Coffee prices have also fallen sharply this year as a result of higher supplies, while sugar prices have remained relatively stable. This trend is expected to continue next year, according to AIECE.

Commodity prices on the world market
Dollar based indices. 1975 = 100



Source: HWWA-Institut für Wirtschaftsforschung.

Norwegian economy

Developments thus far in 1996

According to preliminary, seasonally adjusted figures from the quarterly national accounts, growth in the Norwegian economy picked up somewhat between the second and third quarter of 1996. GDP expanded by 1.8 per cent after rising by 0.7 per cent in the previous quarter. Gross output and demand from mainland Norway also grew at a faster pace in the third quarter than in the second quarter. So far in 1996 household consumption and traditional merchandise exports have imparted the strongest demand stimulus to the mainland economy, but public sector expenditure on goods and services and private mainland fixed investment have also made a contribution.

After exhibiting a sluggish trend in the second quarter of 1996, household consumption expanded markedly again in the third quarter. With an unchanged seasonally adjusted level between the third quarter and the remainder of the year, this domestic demand component is set to rise by more than 4 per cent from 1995 to 1996, i.e. about the same as in 1994. The brisk growth in household consumption must be viewed in connection with the unusually sharp rise in real wages this year and the substantial increase in employment. At the moment there are no indications that the household savings ratio will show an appreciable change from 1995 to 1996.

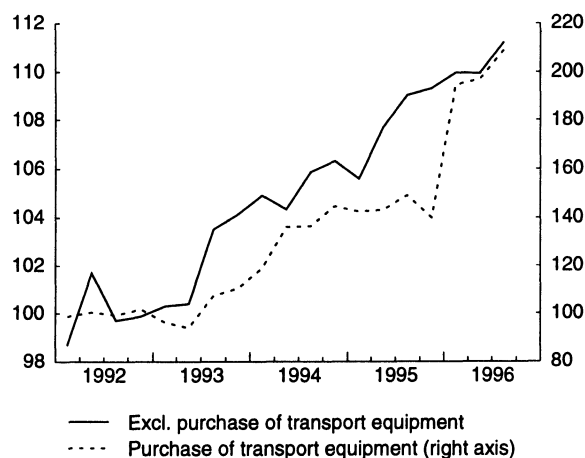
The reduction in car taxes at the beginning of the year and the temporary rise in the deposit refund for scrapped cars for this year have contributed to a particularly sharp rise in car purchases. The contribution from household purchases of cars to consumption growth has so far this year been appreciably higher than in 1994, while other consumption groups as a whole have shown slightly weaker growth. Figures for October and November show a further rise in new passenger car registrations from the third quarter, and

the proposed changes in indirect taxes for 1997 point to high car sales in December. The growth in car purchases, however, generates a weaker growth impetus to activity in the Norwegian economy than a steady rise in all consumption groups inasmuch as cars are both imported goods and heavily taxed.

According to preliminary estimates, mainland fixed investment also advanced from the second to third quarter of this year after recording zero growth in the previous quarter. The entire increase is ascribable to investment in service activities (private and public) inasmuch as investment in manufacturing and other goods-producing industries declined slightly. Statistics Norway's investment intentions survey for the fourth quarter of 1996 indicates a decline in manufacturing investment from the third quarter, and annual growth is set to reach nearly 5 per cent. This investment is expected to show a very moderate rise next year. Investment in public services appears to have risen in the third quarter, but according to preliminary national accounts figures is still below the high level recorded in the first quarter of this year. The implementation of the primary school reform will probably contribute to boosting local government investment in the coming quarters.

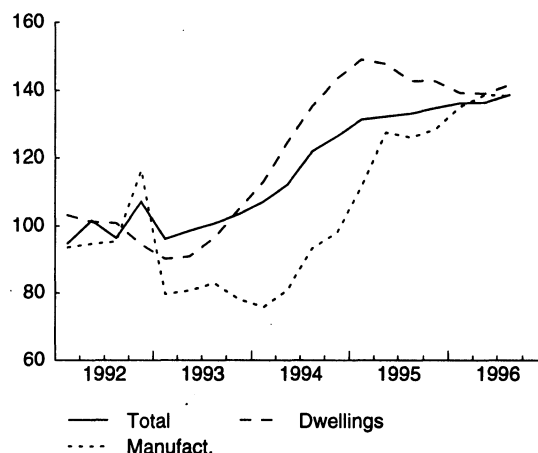
After declining through the previous five quarters, housing investment showed renewed growth in the third quarter of this year. Housing starts and prices in the resale home market indicate that this investment will increase further in the period ahead. Figures for housing starts have been moving up this year after declining through 1995, and prices in the resale home market indicate that this trend may continue in the months ahead. According to Statistics Norway's price statistics, prices of existing dwellings rose in real terms by about 3.5 per cent from the first to second quarter of 1996, and real prices in the first half of the year were a good 5

Consumption in households
Seasonally adjusted volume indices, 1992=100



Source: Statistics Norway.

Gross fixed capital formation, Mainland Norway
Seasonally adjusted volume indices, 1992=100



Source: Statistics Norway.

per cent above the average for last year. By way of comparison, the real rise in resale home prices was about 5 per cent in 1995 and a good 11 per cent the previous year.

However, the square metre price of dwellings sold through estate agents, which has increased at a slightly faster pace than Statistics Norway's price index for existing dwellings the last few quarters, showed signs of levelling off in the third quarter of this year.

Petroleum investment showed little change from the second to third quarter of 1996. Estimates from Statistics Norway's investment intentions survey for the fourth quarter indicate approximately zero growth for this demand component in 1996, with a renewed rise next year.

Traditional merchandise exports edged up from the second to third quarter (seasonally adjusted volume figures), but

remained at a lower level than in the first quarter. As a result of the very sharp rise in the first quarter, however, exports of these goods so far this year are nearly 10 per cent above the quarterly average for last year. Exports of refined petroleum products and fish have boosted the 1996 figures, while electricity exports have made a negative contribution. Other traditional merchandise exports have so far this year been a good 7.5 per cent higher than the quarterly average for last year. The prices of traditional merchandise exports have dropped from 1995 to 1996. For the first three quarters of 1996 as a whole, export prices for manufactured goods were a good 1.5 per cent lower than the quarterly average for last year. The average figure reflects both a pronounced decline in prices of metals, pulp and paper and chemical raw materials, and a sharp rise in export prices for petrol and heating oil as a result of the

Macroeconomic indicators

Growth from previous period unless otherwise noted. Per cent

			Seasonally adjusted			
	1994	1995	95.4	96.1	96.2	96.3
Demand and output						
Consumption in households and non-profit organizations	4.1	2.6	0.0	2.1	0.0	1.4
General government consumption	0.7	0.2	0.1	1.4	0.6	-0.3
Gross fixed investment	6.9	4.5	9.9	-5.3	1.5	1.9
- mainland Norway	17.2	13.5	1.2	1.1	0.0	1.7
- petroleum activities	-7.3	-13.1	15.8	-20.5	6.8	-0.4
Final domestic demand from mainland Norway ¹⁾	5.2	3.8	0.2	1.8	0.2	1.1
Exports	8.2	3.8	1.5	4.6	-0.2	1.6
- crude oil and natural gas	11.6	8.4	10.6	1.7	2.2	3.3
- traditional goods	13.1	4.1	-0.8	10.6	-2.3	1.5
Imports	6.9	5.1	2.9	-1.2	-0.9	2.4
- traditional goods	15.3	9.1	0.5	2.7	0.0	3.2
Gross domestic product	5.0	3.3	0.6	1.8	0.7	1.8
- mainland Norway	4.3	2.7	-0.1	1.1	0.4	1.2
Labour market²⁾						
Man-hours worked	0.9	1.2	1.3	0.2	0.8	0.3
Employed persons	1.2	2.1	1.1	0.8	0.8	1.0
Labour force	0.9	1.6	0.6	1.4	0.3	1.1
Unemployment rate, level	5.4	4.9	4.3	4.8	4.3	4.5
Prices						
Consumer price index ³⁾	1.4	2.4	2.2	0.9	1.0	1.4
Export prices, traditional goods	1.1	7.1	-0.4	-1.3	0.3	-1.1
Import prices, traditional goods	0.3	0.7	0.0	0.3	0.3	-0.4
Balance of payment						
Current balance, bill. Nkr	21.0	28.4	3.8	18.2	16.5	18.7
Memorandum items (unadjusted, level)						
Eurokrone rate (3 month NIBOR)	5.7	5.4	5.2	5.1	4.7	4.9
Average borrowing rate ⁴⁾	8.3	7.8	7.6	7.5	7.3	7.1
Crude oil price, Nkr ⁵⁾	111.7	107.5	105.9	119.1	127.1	134.1
Importweighted krone exchange rate ⁶⁾	103.4	101.0	101.2	101.3	101.5	101.4
Norges Bank's ECU-index ⁶⁾	104.8	103.6	103.4	103.3	102.6	102.6

1) Consumption in households and non-profit organizations + general government consumption + gross fixed capital formation in mainland Norway.

2) Based on monthly figures, seasonally adjusted.

3) Percentage change from previous year.

4) Households' borrowing rate in private financial institutions.

5) Average Norwegian production.

6) Increasing index implies depreciation.

Sources: Statistics Norway and Norges Bank.

Exports

Seasonally adjusted volume indices, 1992=100



Source: Statistics Norway.

Imports

Seasonally adjusted volume indices, 1992=100



Source: Statistics Norway.

increase in oil prices. Prices of primary industry products, including fish, fell by about 10 per cent in the same period.

According to external trade statistics, exports of traditional goods to Norway's 12 main trading partners only grew by 4 per cent in the first three quarters of 1996. A marked decline in exports to several continental EU countries more than offset the vigorous rise in exports to the US, Japan, Denmark and Finland. Exports to countries outside the core of Norway's main trading partners, however, showed brisk growth. It is natural to view this shift in exports in connection with the sluggish economic trend in Germany and some other EU countries, and possibly also in conjunction with persistent efforts to gain a foothold in emerging Asian markets that are recording brisk growth in demand.

Traditional merchandise imports (measured in volume) showed a sharp seasonally adjusted rise from the second to third quarter after stagnating between the first and second quarter. Imports of electricity, aircraft and cars boosted the figure. Imports of machinery and equipment remained virtually unchanged from the previous quarter. This import category has exhibited a slightly weaker trend in 1996 than last year when it accounted for nearly 70 per cent of the total growth in traditional merchandise imports. Prices of traditional import goods have shown little change over the last few quarters, and as an average for the first three quarters of 1996 were 0.3 per cent higher than the average level for last year. Pulp and paper, metals and chemical raw materials posted a sharp decline in prices from 1995 to 1996, whereas prices of cars have risen markedly.

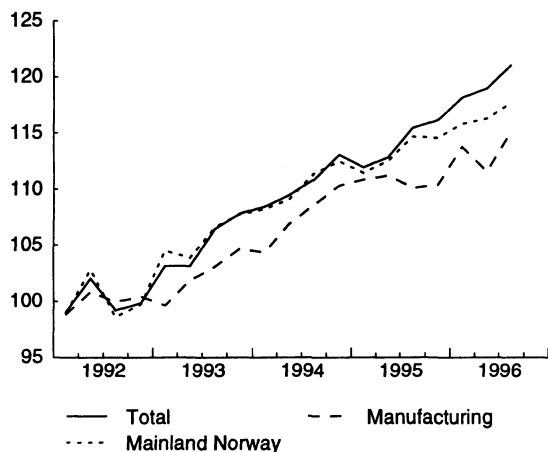
The buoyant growth in exports of manufactured goods between 1995 and 1996 is reflected in a considerable rise in manufacturing production. The average level of manufacturing output in the first nine months of the year was about 2.4 per cent higher than the quarterly average for last year, and slightly above the level recorded in the peak year 1987. Production of machinery and equipment so far this

year has risen faster than in manufacturing industry as a whole, while the pulp and paper sector has made a negative contribution. Private service industries have also posted sharp gains in production so far this year, whereas activity appears to have been weaker in the construction industry than the average for mainland industries. A steep decline in electricity production as a result of reduced inflow to reservoirs has also made a negative contribution to GDP growth, estimated at 0.3-0.4 percentage point so far this year. Seasonally adjusted mainland GDP in the first three quarters of 1996 was about 2.9 per cent higher than the quarterly average for 1995. As a result of a steep rise in oil and gas production, total GDP expanded by about 4.7 per cent in the same period.

Inventory investment so far this year has been slightly lower than in the first three quarters of 1995. In the national accounts, this investment is measured as the difference between supply and use, i.e. the difference between production and imports on the one hand and deliveries to product inputs, exports, consumption and investment on the other. Inventory investment showed a very sharp rise in the period 1993-1995. Even though it is reasonable to expect some increase in inventory investment following the recession of the previous years, the magnitude of the figures may indicate that the national accounts figures in this period have to some extent overestimated the growth in supply and/or underestimated the growth in demand. Similarly, the decline in inventory investment so far in 1996 may be an indication that the national accounts figures underestimate production (or imports) or overestimate demand.

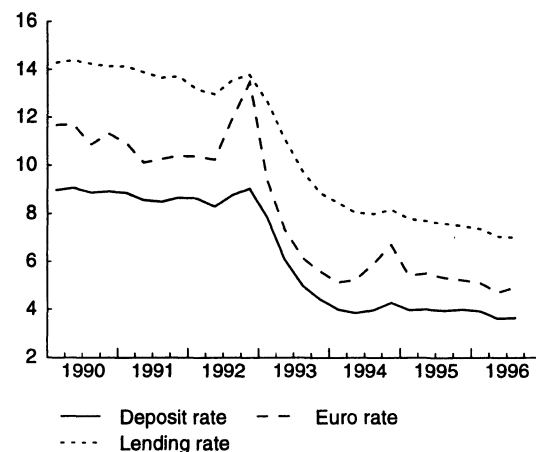
According to revised national accounts figures for 1995, employment advanced by 2.1 per cent last year following a growth of 1.2 per cent the previous year. As a result of the revision of Statistics Norway's labour force survey (LFS) from the beginning of the year, the figures for 1995 and 1996 are not directly comparable. It is therefore difficult to

Gross domestic product
Seasonally adjusted volume indices, 1992=100



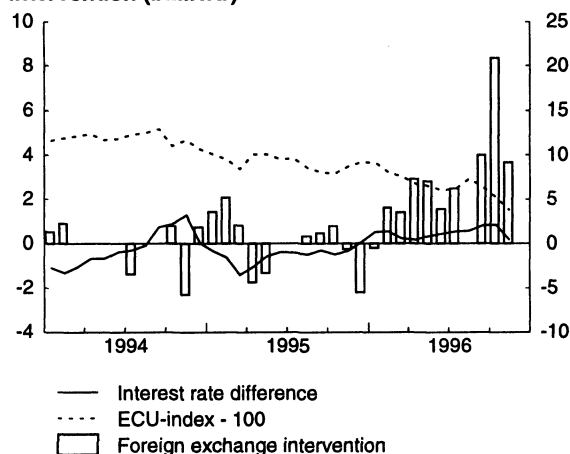
Source: Statistics Norway.

Average deposit and lending rate in private financial institutions and 3 month Nkr euro rate



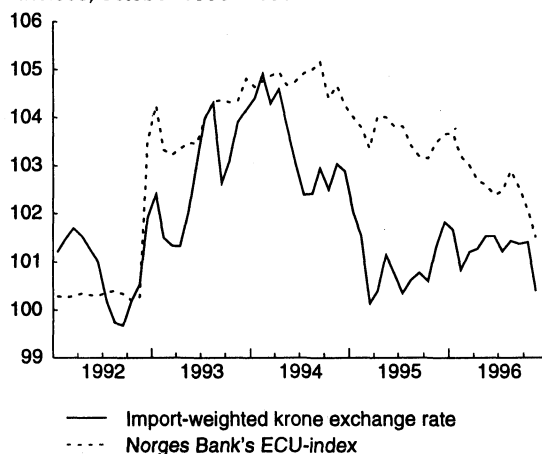
Source: Norges Bank.

Interest rate difference and exchange rate against ECU and Norges Bank's foreign exchange intervention (bill.NKr)



Source: Norges Bank.

Development in import-weighted krone exchange rate and Norges Bank's ECU-index
Indices, October 1990 = 100



Source: Norges Bank.

interpret changes from 1995 to 1996. In connection with the current publication of LFS figures, adjustments have been made for estimated breaks in the series. Based on this adjustment, LFS figures show a growth in employment of about 3.3 per cent from the first three quarters of 1995 to the same period this year. Figures for identical survey weeks last year and in 1996, excluding the summer holiday months, show a growth in the number employed of 2.9 per cent so far this year, whereas preliminary figures from the Employer Register for relevant employment in the period March-September show a rise in employment of about 2.5 per cent. Over the last five years the Employer Register has registered the same or stronger growth in the number of persons employed than the LFS.

According to adjusted LFS observations, the number of man-hours worked has also increased considerably so far

this year, although at a notably slower pace than the number employed. The fall in number of man-hours worked per employee is related to a pronounced rise in sickness absenteeism from 1995 to 1996 as well as higher youth employment.

According to adjusted LFS figures, the labour force, which rose at a noticeably slower pace than employment through 1994 and 1995, was as an average for the first three quarters of 1996 more than 2.5 per cent above the level in the same period one year earlier. According to the LFS, unemployment thus declined by a good half a percentage point. LFS unemployment in the third quarter is estimated at about 4.5 per cent of the labour force. In the fourth quarter of 1995 the unemployment rate was down to 4.3 per cent, but this figure was probably erratically low. Hence, there is reason to assume that actual unemployment has declined

over the past year. Changes in the Directorate of Labour's figures for the sum of registered unemployed and persons participating in labour market measures, excluding rehabilitation, point in the same direction. This unemployment indicator has been declining in the period to end-November this year and is now at a level on a par with the average for 1989. The number of new vacancies at employment offices grew by about 8 per cent (seasonally adjusted) from the first half of the year to the period July-November, and the average for the first ten months of this year was a good 13 per cent above the level in the same period last year. The total number of vacancies has also increased during the past few months.

In the first ten months of 1996 the consumer price index was on average 1.2 per cent higher than in the same period last year. The year-on-year rise in prices moved up from 0.9 per cent in the first half of 1996 to an average 1.5 per cent for the months July-October. The elimination of VAT compensation on milk, cheese and meat from 1 July and higher electricity prices have pushed up the inflation rate. So far this year prices of imported consumer goods have contributed to reducing average price inflation. Part of the explanation for this is the reduction in car taxes from 1 January 1996 inasmuch as cars have a high weight in this consumption group. Through 1995 and most of 1996 the Norwegian krone depreciated against an import-weighted basket of currencies of our main trading partners. In isolation, this may have contributed to pushing up the rise in prices in Norway. With a 12-month rise in prices in November and December on a par with the level recorded in October, price inflation for the year as a whole will be 1.3 per cent. This is lower than in the ECU area and will probably also be below the average for our main trading partners.

The results of this year's wage settlements point to a growth in wages per normal man-year of an estimated 4.2 per cent in 1996, appreciably higher than in the previous three years. It is natural to view higher wage growth in connection with the favourable trend in profitability in some business sectors over the past few years, partly as a result of the sharp rise in manufacturing industry's export prices from 1994 to 1995. Some of the pay increases awarded in this year's settlement will not become effective until relatively late in the year, entailing that the wage carry-over into 1997 will be relatively high, estimated at about 2 per cent.

Financial institutions' interest rates generally shadowed the moderate decline in money market rates through 1995 and into 1996. At the end of the second quarter of 1996 households' average borrowing rate was a good half a percentage point lower than the level one year earlier. The three-month Norwegian euro-rate subsequently edged up to a level of about 0.8 percentage point above the corresponding ECU rate in October, whereas financial institutions' interest rates fell further. Since the beginning of the year and up to 5 November the Norwegian krone appreciated against the ECU, at the same time that Norges Bank purchased foreign exchange equivalent to about Nkr 65 billion. This indicates that during this period Norges Bank

contributed to keeping Norwegian money market rates at a higher level than balance in the foreign exchange market would imply. In response to the persistent appreciation of the Norwegian krone against the ECU, Norges Bank lowered its overnight lending and sight deposit rates to 6 and 4 per cent, respectively, on 5 November. Norwegian money market rates immediately fell to a level just above corresponding ECU rates, and financial institutions announced further cuts in their interest rates. The krone, however, has remained strong against the ECU, and Norges Bank has purchased additional foreign currency. The persistent upward pressure on the krone may indicate that participants in the foreign exchange market perceive the projected high current-account surpluses in the period ahead as an indication that the krone is undervalued even though the surpluses are partly a result of the conversion of petroleum wealth to foreign assets. The appreciation of both the US dollar and Swedish krone is the reason that the import-weighted krone exchange rate and manufacturing industry's effective exchange rate have not appreciated the past year. Neither of these currencies is included in the ECU index, but they have a substantial weight in the other two exchange indices.

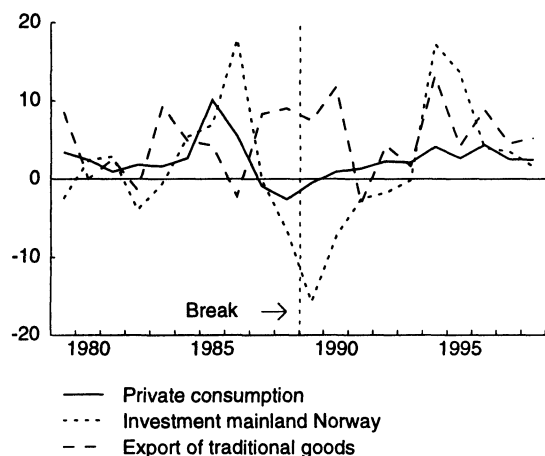
The current account of the balance of payments showed a surplus of Nkr 53.4 billion in the first three quarters of 1996 as a whole, equivalent to 7.2 per cent of GDP, and nearly Nkr 29 billion higher than the level in the same period last year. The value of oil and exports so far this year has been a good Nkr 28 billion above the level in the first three quarters of 1995, thereby making a substantial contribution to the sharp rise in the surplus. Exports, excluding oil and gas, rose in value terms by a good Nkr 6 billion, while total imports grew by Nkr 8.6 billion, with higher electricity imports accounting for about Nkr 2 billion. The deficit on the interest and transfers balance fell by Nkr 3.1 billion in the same period.

Outlook for the period ahead

Economic growth in 1996 will be higher than in 1995. It appears that the rise in employment will be unusually strong this year both in terms of man-hours worked and not least number of persons. This is being offset, however, by an unusually brisk growth in the labour force, entailing that unemployment will be reduced at about the same pace as in the previous two years. Consumer price inflation in 1996 will be the lowest since 1960, whereas wage growth has risen and will result in the highest growth in real wages that has been recorded in many years.

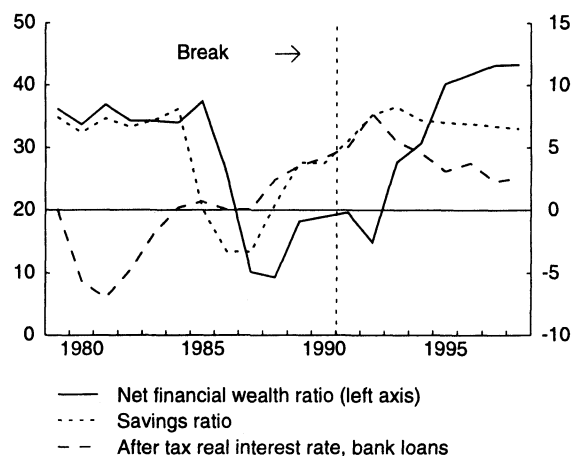
The macroeconomic projections for 1996 presented in this report are generally the same as those presented in Economic Survey 2/96 with regard to nominal developments, unemployment and output growth. Whereas the growth projection for mainland GDP has not been revised to any extent, the estimate for total GDP growth has been revised upwards due to higher-than-expected oil and gas production. Combined with higher oil prices than assumed earlier, this entails that the projection for the current-account

Consumption, capital formation and exports 1979-98
Percentage growth. Forecasts for 1996 - 1998



Source: Statistics Norway.

Household financial indicators 1979-98
Per cent. Forecasts for 1996 - 1998



Source: Statistics Norway.

balance has been revised upwards by a substantial margin. The lower estimate for imports has the same effect.

The growth projections for production and demand in 1997 have been revised upwards, partly because fiscal policy is expected to be slightly more expansionary than assumed earlier and partly due to higher estimates for the growth in petroleum investment. Our projections for wage and price inflation in 1997 remain approximately unchanged. The proposals for higher indirect taxes that were recently presented in the final budget bill are incorporated in the projections. Towards the end of 1996 interest rates in Norway declined by about half a percentage point and money market rates are now approximately on a par with corresponding ECU rates. We expect this to be the case again next year, and project that interest rates in Europe will remain at about the current level in 1997.

Slightly higher growth among our trading partners in 1997

Even though there are now signs of somewhat higher economic growth in the EU in 1997, the expected upswing is moderate, partly due to a continued contractionary fiscal policy. In the US, growth next year is likely to be about the same as this year or slightly higher, and interest rates may edge up. Developments among our trading partners indicate moderate growth in exports of traditional goods through 1997 and in 1998.

Moderate inflation is expected among most of Norway's trading partners in the period ahead. With the exception of crude oil prices, most commodity prices have moved on a downward trend in the second half of 1996. We project that this fall in prices will come to a halt during the winter months and that important commodity prices will edge up through 1997 and 1998. Crude oil prices, however, are expected to show a moderate decline in the first half of 1997.

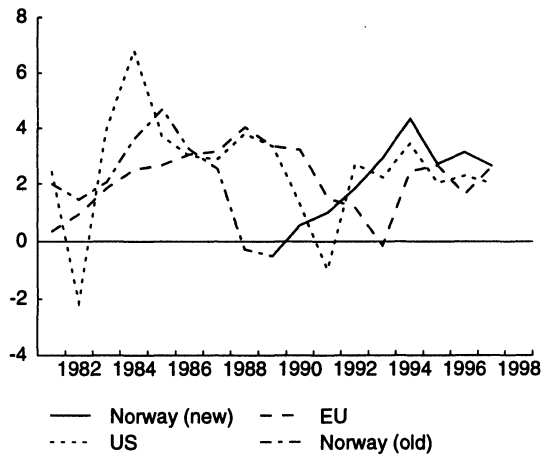
Somewhat lower growth in government expenditure

In step with stronger growth in the private non-petroleum sector since 1993, fiscal policy has moved in a contractionary direction. Even though our projections for the growth in government expenditure on goods and services in 1996 and 1997 have been revised upwards compared with earlier, the estimates entail that fiscal policy will continue to curb domestic demand and production. The Government's proposal for spending growth in the final budget bill entails slightly higher growth in public expenditure on goods and services than assumed earlier for 1997. The Government has proposed that this increase be covered by increasing the wealth tax and some indirect taxes. The changes in indirect taxes are incorporated in our projections. Compared with our previous projections, general government investment, partly linked to the implementation of the primary school reform, has been revised down slightly in 1996 and transferred to 1997.

Stronger growth impetus from petroleum activities in 1997

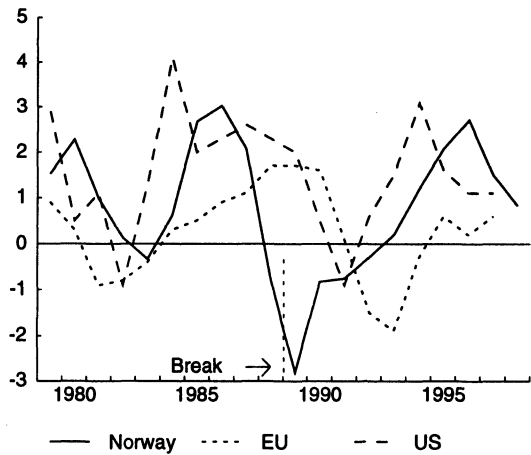
The estimates for petroleum investment have been revised slightly since the last Economic Survey was presented based on the latest investment intentions survey from Statistics Norway. Investment growth between 1995 and 1996 has been revised down substantially because of the reduced estimate for field development. This is ascribable to considerably lower investment figures for the third quarter for a field that has been developed compared with the estimate in the previous survey. In addition, some investment has been shifted from 1996 to 1997. Investment in connection with Ekofisk II has been moved up from 1998 to 1997, and all in all the investment projection for 1997 has been revised upwards considerably. The composition of investment next year is expected to shift towards a higher Norwegian share of deliveries. Petroleum investment in 1998 is expected to show little change from 1997. The projections embody the assumption that the construc-

GDP for mainland Norway, US and EU 1981-98
Per cent change. Forecasts 1996 - 1998



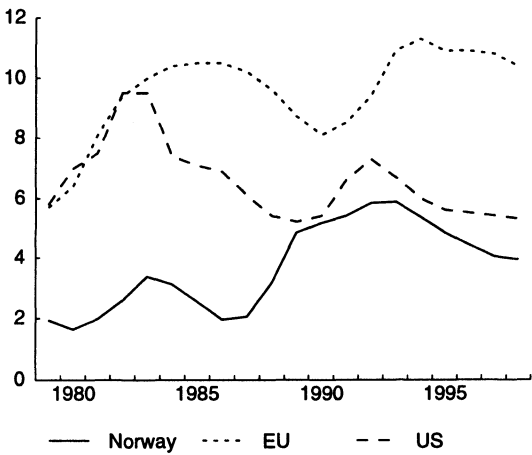
Sources: Statistics Norway, OECD and European Commission.

Employment 1979 - 1998
Percentage growth. Forecasts for 1996 - 1998



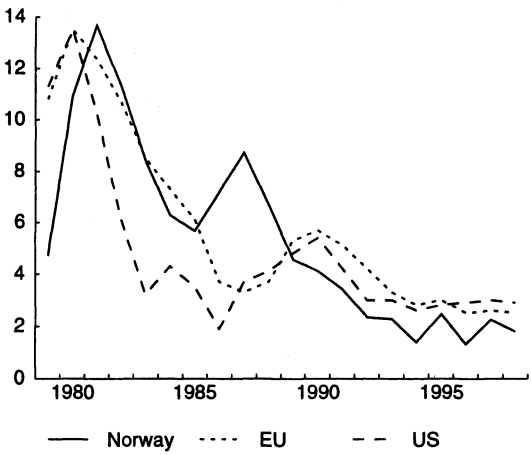
Sources: Statistics Norway, OECD and European Commission.

Unemployment 1979 - 1998
Per cent. Forecasts for 1996 - 1998



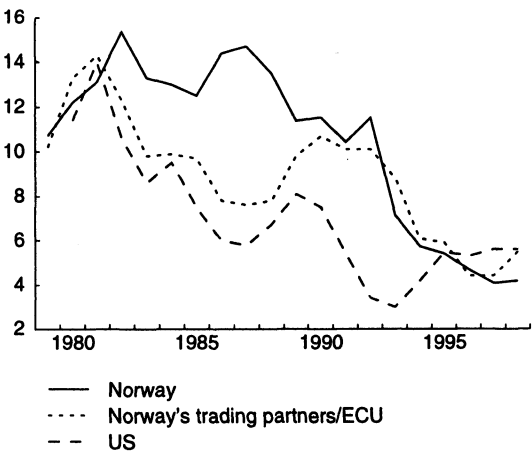
Sources: Statistics Norway, OECD and European Commission.

Consumer prices 1979 - 1998
Percentage growth. Forecasts for 1996 - 1998



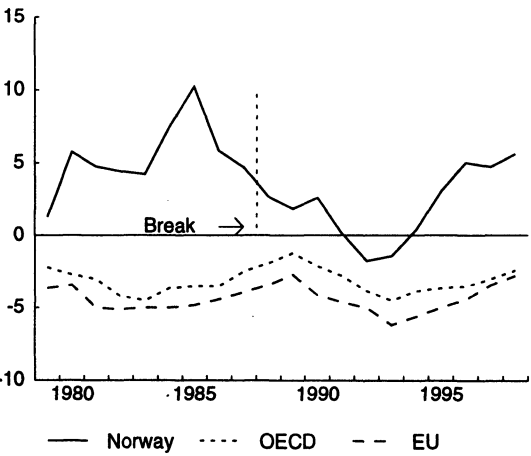
Sources: Statistics Norway, OECD and European Commission.

3 months euro rates 1979 - 1998
Percentage growth. Forecasts for 1996 - 1998



Sources: Statistics Norway, OECD and European Commission.

General government net lending 1979 - 1998
Per cent of GDP. Forecasts for 1996 - 1998



Sources: Statistics Norway, OECD and European Commission.

Main economic indicators

Percentage change from previous year unless otherwise noted

	1995	1996			1997			1998
	Accounts	SN	NB ¹⁾	MoF ²⁾	SN	NB ¹⁾	MoF ²⁾	SN
Demand and output								
Consumption in households and non-profit organizations	2.6	4.3	4 1/4	4.2	2.5	2 3/4	3.4	2.4
General government consumption	0.2	2.3	1 1/3	2.2	1.6	1	0.9	1.6
Gross fixed investment	4.5	4.0	4 1/4	6.9	4.7	2 1/2	3.3	1.4
- mainland Norway	13.5	3.9	6	9.6	3.5	2 1/2	3.8	1.5
- petroleum activities	-13.1	0.7	2 1/4	2.2	8.9	2	3.4	1.1
Demand from mainland Norway ³⁾	3.8	3.8	4	4.7	2.5	2 1/4	2.9	2.0
Change in stocks ⁴⁾	1.2	-0.5	-	-0.4	0.0	-	0.1	0.0
Exports	3.8	8.7	8 1/4	7.5	4.5	5	6.3	4.8
- crude oil and natural gas	8.4	14.8	15	14.3	4.7	4 1/2	6.7	4.4
- traditional goods	4.1	8.8	8 1/4	8.6	4.5	6 1/2	5.2	5.2
Imports	5.1	4.8	4	3.5	4.3	3 3/4	6.4	3.5
- traditional goods	9.1	5.3	5 1/4	6.1	3.3	4 1/4	6.2	2.8
Gross domestic product	3.3	4.8	5	5.4	3.0	3	3.1	2.6
- mainland Norway	2.7	3.1	3 1/4	3.6	2.7	2 1/2	2.5	2.3
Labour market⁵⁾								
Persons employed	2.1	2.7	2 3/4	3	1.5	1 1/2	1 1/2	0.8
Unemployment rate (level)	4.9	4.4	4 1/4	4 1/4	4.0	4	4	3.9
Prices and wages								
Wages per man-hour	3.3	4.2	4 1/4	4	3.6	5	3 1/2	3.6
Consumer price index	2.4	1.3	1 1/4	1 1/4	2.3	2 1/2	2 1/2	1.8
Export prices, traditional goods	7.1	-1.8	-1 1/4	-2.1	0.2	1 1/2	1.7	0.4
Import prices, traditional goods	0.7	0.4	1/4	-0.6	0.3	1	1.7	0.7
Resale house price (real)	5	7.6	8	..	6.0	5	..	5.0
Balance of payment								
Current balance (bill. Nkr)	28.4	64.6	69	77.6	71.2	76	82.0	78.4
Current balance (per cent of GDP)	3.1	6.4	7	7.6	6.8	7 1/4	7.7	7.1
Memorandum items								
Household saving rate (level)	7.0	6.9	6 1/2	6	6.7	6 1/4	5	6.5
Money market rate (level)	5.4	4.7	..	..	4.1	..	..	4.2
Average borrowing rate (level) ⁶⁾	7.8	7.0	..	..	6.4	..	..	6.2
Crude oil price Nkr (level) ⁷⁾	105.9	132	127	134	126	118	125	126
International market growth	4.9	4.0	..	4 1/2	6.0	..	5 3/4	5
Importweighted krone exchange rate ⁸⁾	-2.4	-0.5	..	..	0	..	..	0
Budget balance, general government ⁹⁾	3.0	6.1	..	6.3	6.0	..	6.5	6.5

1) NB: Forecast according to Norges Bank, Penger og kreditt 1996/3.

2) MoF: Ministry of Finance's forecasts. Final budget bill.

3) Consumption in households and non-profit organizations + general government consumption + gross fixed capital formation in mainland Norway.

4) Per cent of GDP.

5) The figures for 1996 and 1997 are adjusted for known breaks in the Labour Force Survey measurements, and are comparable with previously published figures.

6) Households' borrowing rate in private financial institutions.

7) Average, Norwegian oil production.

8) Positive sign implies depreciation.

9) General government net lending in per cent of GDP.

tion of one gas-generated power station will start in 1997 and one in 1998, with full production at both stations during the year 2000. Total investment costs for the gas-generated power stations are estimated at Nkr 3.6 billion.

Brisk growth in demand also in 1997

The shift in investment from 1996 to 1997 entails that total demand will continue to rise considerably in 1997 and at a faster pace than assumed earlier. However, the growth in household consumption, etc. has not been revised upwards

due to this, but as a result of higher consumption in 1996 the level in 1997 is also higher. The household savings ratio is expected to edge down in the period ahead. In recent months housing starts have risen and a clear upswing in housing investment is expected to take place over the next few quarters. The fall in interest rates this autumn will amplify the turnaround somewhat. Moreover, investment growth in the mainland economy is expected to be far weaker in 1997 than in 1996. Investment growth is projected to slow further in 1998. This is related to the projected decline in general government investment from 1997 to

1998 following the conclusion of investment projects linked to the primary school reform. In addition, major investment projects such as the main airport at Gardermoen and the new National Hospital will be completed during 1998.

Somewhat more moderate output growth in the years ahead

Whereas total GDP is expected to expand by nearly 5 per cent from 1995 to 1996, GDP for mainland Norway is projected to grow by a good 3 per cent. Buoyant growth in oil and gas production is an important reason for the difference. The fall in electricity production through 1996 helps to explain why the growth in the mainland economy has not been stronger in relation to the growth in total demand. In isolation, this reduces GDP by about Nkr 3 billion, equivalent to 0.4 per cent of mainland GDP. Moreover, the steadily rising inventory investment trend has been broken, entailing that part of the demand growth has been met through lower inventory accumulation than earlier and not by higher production. Private services have posted the strongest output growth.

Production in the power supply sector is expected to return to normal during 1997. With continued high demand growth, mainland GDP growth is therefore set to be higher than projected earlier, but still slightly lower than in 1996. Output growth is expected to slow further in 1998 in step with a lower growth in demand.

Unusually sharp employment growth in 1996

It now appears that the growth in man-hours worked may be 1.8 per cent in 1996, or slightly higher than projected earlier. Employment growth, measured by number of persons, may be about one per cent higher. As the labour force has also increased sharply, the estimate for LFS unemployment is approximately unchanged. Increased sickness absenteeism and part-time employment help to explain the difference between the growth in man-hours worked and number of persons employed.

The estimates for 1997 are based on a more parallel movement in the growth in man-hours worked and persons employed. Compared with earlier, the estimates have been revised upwards slightly in line with the projection for mainland GDP growth. Unemployment is projected to fall further in 1997, at about the same pace as in the previous three quarters, but is then expected to taper off at a level of about 4 per cent. Slower growth in production is the most important reason for this. In addition, the growth in real capital as a result of the investment expansion in recent years will contribute to higher labour productivity and thus lower employment growth.

Continued moderate price and wage inflation

As noted earlier, the sharp improvement in profitability in manufacturing industry contributed to higher wage growth from 1995 to 1996. Due to unusually low consumer price

inflation in 1996, the growth in real wages in 1996 is therefore higher than in many years. Our projections still point to slightly lower nominal wage growth next year and a noticeably lower growth in real wages inasmuch as consumer price inflation is expected to rise by about 1 percentage point from 1996 to 1997. The main reasons for the increase in price inflation are changes in indirect tax policy and the increase in electricity prices as well as the domestic cost impetus generated by higher wage growth. The impetus from higher import prices is expected to be approximately the same in 1996 and 1997.

The proposed increases in indirect taxes in the final budget bill will, in isolation, push up consumer prices by 0.1 per cent in 1997. It now appears that the increases in electricity prices for general consumption may be slightly lower in 1997 than assumed earlier. However, there is still reason to expect a slight decline in electricity prices through 1997. In the second half of 1997 the effects of the elimination of VAT compensation in 1996 will no longer contribute to the 12-month rise in consumer prices, which in isolation will reduce the rise in prices by about 0.3 percentage point. Consumer price inflation in the first quarter of 1997 may then reach 3 per cent on a 12-month base, whereas the rise in the fourth quarter is expected to be less than 2 per cent. For 1997 as a whole, we have raised our projection for consumer price inflation to 2.3 per cent as a result of the proposed hikes in indirect taxes in the final budget bill.

For 1998, price inflation is projected at less than 2 per cent if there are no new increases in indirect taxes and inflation among Norway's trading partners remains moderate.

Wage growth is still projected at 3.6 per cent in 1997. The decline in wage growth from 1996 is primarily ascribable to the noticeable deterioration in manufacturing industry's profitability through 1996. However, we do not expect this to continue in 1997 and 1998, although a projected weak rise in prices of manufactured goods is assumed to make a moderate contribution to wage growth in both 1997 and 1998. Changes in unemployment also result in slightly stronger real wage growth in 1998 than in 1997.

Norway: Trends in selected macroeconomic variables

At fixed 1993 prices. Billion Nkr

	Unadjusted		Seasonally adjusted							
	1994	1995	94.4	95.1	95.2	95.3	95.4	96.1	96.2	96.3
Consumption in households and non-profit organizations	428584	439735	108420	107650	109707	111209	111168	113539	113586	115222
Direct purchases abroad by resident households	17286	17298	4310	3975	4398	4538	4387	4239	4407	4664
- Direct purchases in Norway by non-resident households	-15613	-14700	-3528	-3926	-3598	-3534	-3642	-3652	-3525	-3529
General government consumption	180868	181182	45110	44885	45195	45530	45572	46228	46492	46347
Gross fixed capital formation	179759	187837	44103	46678	47069	44829	49261	46642	47361	48275
Oil	52972	46014	11428	10777	11021	11219	12997	10332	11032	10992
Shipping	4826	3373	-296	1681	1595	-1067	1164	812	816	1169
Mainland Norway	121961	138449	32971	34220	34452	34676	35100	35498	35513	36114
Manufacturing and mining	10698	15158	3017	3427	3918	3871	3942	4147	4256	4249
Production of other goods	11250	11731	2815	3035	2935	2809	2905	2991	2767	2730
General government	27706	27562	7124	7064	6872	7103	6523	7295	7151	7229
Dwellings	23526	26510	6533	6785	6727	6505	6494	6338	6334	6441
Other services	48781	57488	13482	13909	14001	14389	15236	14728	15005	15464
Stocks	13506	23997	3337	3443	6553	8133	5870	4388	4438	6346
Gross capital formation	193266	211834	47440	50121	53622	52962	55131	51030	51798	54620
Final domestic use of goods and services	802717	832751	200970	202656	208524	209701	211872	210797	211876	216190
Demand from mainland Norway	731413	759366	186502	186755	189355	191415	191841	195265	195591	197683
Exports	341828	354689	90372	87652	86369	89639	91002	95204	95031	96586
Traditional goods	127108	132372	33692	33808	32029	33482	33228	36761	35932	36476
Crude oil and natural gas	116112	125818	31214	30198	30125	31095	34400	34999	35786	36961
Ships and oil platforms	10416	10954	4182	2042	3030	3721	2135	1933	1678	882
Services	88191	85544	21285	21605	21186	21341	21239	21511	21635	22267
Total use of goods and services	1144545	1187439	291342	290308	294893	299340	302873	306001	306907	312775
Imports	279766	294127	70063	71202	73989	73386	75551	74671	74010	75777
Traditional goods	184085	200845	47454	48716	50232	50914	51184	52569	52559	54235
Crude oil	943	1244	228	349	382	328	185	214	219	140
Ships and oil platforms	12446	13250	2351	3198	2566	2425	5061	3085	2162	1962
Services	82292	78787	20030	18938	20808	19719	19120	18804	19071	19441
Gross domestic product (GDP)	864780	893312	221279	219107	220905	225954	227323	231330	232896	236998
Mainland Norway	725221	745023	184906	183213	184969	188522	188294	190347	191189	193535
Oil activities and shipping	139559	148290	36373	35894	35936	37431	39028	40982	41707	43463
Mainland industry	651036	666373	165451	164038	165867	168533	167937	169627	170599	172379
Manufacturing and mining	101380	104322	25999	26132	26221	25955	26016	26815	26289	27143
Production of other goods	69487	75588	17978	18444	18762	18865	19463	19232	18244	17588
General government	134578	135321	33847	33348	33643	33977	34353	34552	34766	34917
Private services	345591	351141	87627	86114	87241	89736	88105	89028	91300	92731
Correction items	74185	78649	19455	19175	19102	19989	20357	20721	20590	21156

Norway: Trends in selected macroeconomic variables

Percentage volume change in 1993-prices

	Unadjusted		Seasonally adjusted							
	1994	1995	94.4	95.1	95.2	95.3	95.4	96.1	96.2	96.3
Consumption in households and non-profit organizations	4.1	2.6	0.7	-0.7	1.9	1.4	0.0	2.1	0.0	1.4
Direct purchases abroad by resident households	8.6	0.1	-3.1	-7.8	10.6	3.2	-3.3	-3.4	4.0	5.8
- Direct purchases in Norway by non-resident households	13.5	-5.8	-13.5	11.3	-8.4	-1.8	3.1	0.3	-3.5	0.1
General government consumption	0.7	0.2	-0.8	-0.5	0.7	0.7	0.1	1.4	0.6	-0.3
Gross fixed capital formation	6.9	4.5	-2.7	5.8	0.8	-4.8	9.9	-5.3	1.5	1.9
Oil	-7.3	-13.1	-8.3	-5.7	2.3	1.8	15.8	-20.5	6.8	-0.4
Shipping	-30.5	-30.1	..	..	..	..	..	..	..	..
Mainland Norway	17.2	13.5	3.8	3.8	0.7	0.6	1.2	1.1	0.0	1.7
Manufacturing and mining	8.3	41.7	5.2	13.6	14.3	-1.2	1.8	5.2	2.6	-0.2
Production of other goods	2.5	4.3	2.4	7.8	-3.3	-4.3	3.4	2.9	-7.5	-1.3
General government	1.6	-0.5	2.6	-0.8	-2.7	3.4	-8.2	11.8	-2.0	1.1
Dwellings	34.9	12.7	6.0	3.9	-0.9	-3.3	-0.2	-2.4	-0.1	1.7
Other services	26.6	17.8	3.3	3.2	0.7	2.8	5.9	-3.3	1.9	3.1
Stocks	40.2	77.7	..	..	..	..	..	..	..	..
Gross capital formation	8.7	9.6	-5.0	5.7	7.0	-1.2	4.1	-7.4	1.5	5.4
Final domestic use of goods and services	4.4	3.7	-1.0	0.8	2.9	0.6	1.0	-0.5	0.5	2.0
Demand from mainland Norway	5.2	3.8	0.8	0.1	1.4	1.1	0.2	1.8	0.2	1.1
Exports	8.2	3.8	7.0	-3.0	-1.5	3.8	1.5	4.6	-0.2	1.6
Traditional goods	13.1	4.1	2.5	0.3	-5.3	4.5	-0.8	10.6	-2.3	1.5
Crude oil and natural gas	11.6	8.4	14.7	-3.3	-0.2	3.2	10.6	1.7	2.2	3.3
Ships and oil platforms	-12.0	5.2	..	..	..	..	..	..	..	..
Services	0.2	-3.0	-3.2	1.5	-1.9	0.7	-0.5	1.3	0.6	2.9
Total use of goods and services	5.5	3.7	1.3	-0.4	1.6	1.5	1.2	1.0	0.3	1.9
Imports	6.9	5.1	-0.7	1.6	3.9	-0.8	2.9	-1.2	-0.9	2.4
Traditional goods	15.3	9.1	-0.4	2.7	3.1	1.4	0.5	2.7	-0.0	3.2
Crude oil	-17.5	32.0	-9.2	53.1	9.5	-14.1	-43.7	15.6	2.2	-35.8
Ships and oil platforms	-33.9	6.5	..	..	..	..	..	..	..	..
Services	0.4	-4.3	-3.6	-5.5	9.9	-5.2	-3.0	-1.7	1.4	1.9
Gross domestic product (GDP)	5.0	3.3	2.0	-1.0	0.8	2.3	0.6	1.8	0.7	1.8
Mainland Norway	4.3	2.7	1.0	-0.9	1.0	1.9	-0.1	1.1	0.4	1.2
Oil activities and shipping	8.8	6.3	7.4	-1.3	0.1	4.2	4.3	5.0	1.8	4.2
Mainland industry	4.0	2.4	0.8	-0.9	1.1	1.6	-0.4	1.0	0.6	1.0
Manufacturing and mining	5.4	2.9	1.6	0.5	0.3	-1.0	0.2	3.1	-2.0	3.2
Production of other goods	0.8	8.8	2.5	2.6	1.7	0.6	3.2	-1.2	-5.1	-3.6
General government	1.1	0.6	0.3	-1.5	0.9	1.0	1.1	0.6	0.6	0.4
Private services	5.4	1.6	0.4	-1.7	1.3	2.9	-1.8	1.0	2.6	1.6
Correction items	7.5	6.0	2.6	-1.4	-0.4	4.6	1.8	1.8	-0.6	2.7

Norway: Price indices for selected macroeconomic variables

	1995	Percentage change from the same periode the previous year				Growth from previous quarter seasonally adjusted. Per cent*			
		95.4	96.1	96.2	96.3	95.4	96.1	96.2	96.3
Consumption in households and non-profit organizations	2.5	2.5	0.5	1.4	1.6	0.8	-0.4	0.8	0.5
General government consumption	3.5	3.1	2.6	3.1	3.7	0.9	1.1	0.7	1.0
Gross fixed capital formation	3.1	3.2	3.1	2.4	2.0	0.0	0.9	0.3	0.8
- mainland Norway	3.0	3.5	3.0	1.8	3.0	1.4	0.4	0.3	1.2
Final domestic use of goods and services	2.7	2.9	1.7	2.1	2.0	0.2	0.0	0.9	0.9
-demand from mainland Norway	2.8	2.9	1.5	1.9	2.4	0.9	0.1	0.7	0.7
Exports	2.2	0.4	1.2	3.8	6.6	1.0	2.9	2.3	0.2
- traditional merchandise exports	7.1	3.8	-3.0	-1.0	-2.6	-0.4	-1.3	0.3	-1.1
Total use of goods and services	2.5	2.2	1.5	2.6	3.3	0.4	0.8	1.3	0.7
Imports	0.9	0.8	0.9	1.7	1.1	0.2	0.6	0.5	-0.4
- traditional merchandise imports	0.7	0.4	0.4	-0.1	0.2	0.0	0.3	0.3	-0.4
Gross domestic product (GDP)	3.1	2.6	1.7	2.8	4.1	0.5	0.8	1.6	1.1
- mainland Norway	4.2	3.9	0.9	1.7	1.4	0.4	-0.5	0.9	0.6

* See "Technical comments".

Technical comments on the quarterly accounts figures

Statistics Norway is currently undertaking an extensive revision of the national accounts. Revised figures for the years 1988-1995 were published in Statistics Weekly no. 18 1996 and in Økonomiske analyser 4/96. The figures for 1994 and 1995 may deviate somewhat from figures published earlier due to new information.

Quarterly calculations: The calculations are made on a less detailed level than the calculations for the annual national accounts, and are based on more simplified procedures.

Base year and linking the data: In the quarterly national accounts all volume measures are currently calculated at constant 1993 prices using weights from that year. The choice of base year influences the constant-price figures and thus the annual rates of change in volume (growth rates). For the sake of comparison, all tables present growth rates with 1993 as the base year (common year of recalculation). The recalculation of prices is carried out at the sectoral level of the quarterly national accounts.

At the moment the figures from the new quarterly national accounts (QNA) only go back to the first quarter of 1993, which is too short a period for seasonal adjustment. Based on the new annual figures for the period 1988-1993, provisional quarterly figures on an aggregated level have been prepared for Statistics Norway's macroeconometric model MODAG. These figures are linked backwards in time to the quarterly figures from the old national accounts, and forward in time to the new quarterly accounts from the QNA for seasonal adjustment. The new seasonally adjusted series are more aggregated than the figures in the quarterly national accounts. In this issue of Economic Survey it has therefore not been possible to provide seasonally adjusted estimates for all variables which previously were presented in this way. This applies, for example, to the old classification of competition within manufacturing industry and the old distribution of private consumption on goods and services.

Economic policy calendar 1996

September

3. Selmer will build a new printing works for Schibsted Trykk in Oslo. The principal contract has a total value of Nkr 330 million. The contracts cover, among other things, the construction of a printing hall, packing room and administrative wing.

4. The price of crude oil is quoted at \$ 23.50 p/b, its highest level for almost five years. The rise in prices is partly triggered by US bombings of Iraq as well as low oil reserves in the US. The high price boosts Norway's gross revenues by about Nkr 110 million per day compared with the National Budget.

5. The accounts for the development of the Sleipner West field are presented, showing that the project has cost Nkr 2.6 billion less than budgeted. The field came on stream on 30 August, seven months earlier than planned.

10. Rena Karton is ensured continued operations after Orkla Finans has obtained the necessary Nkr 100 million from 25 new investors.

12. Kværner presents plans for building Europe's highest building in London. The building, which will be called "London's Millennium Tower", will be 385 metres high and is expected to cost Nkr 4 billion.

12. Novit AS in Trondheim wins the IT contract with Sparebanken Nord-Norge, Sparebanken Midt-Norge, Sparebanken Rogaland and Sparebanken Vest. The contract is worth Nkr 150 million annually.

18. Saga Petroleum makes a moderate oil discovery close to the Tordis field. The find is financially interesting because it is located close to existing infrastructure.

18. Assessed taxes and National Insurance premiums amount to Nkr 143 billion for 1995, compared with Nkr 133 billion for 1994.

19. 52 per cent of the electricians in the National Union of Electricians and Power Station Workers (NEKF) vote yes to the wage settlement. NELFO, the employer's organization, also gives its approval to the agreement. NEKF gained acceptance for its main demand concerning the right to post-qualifying training and further education.

21. Sweden's Minister of Finance Erik Åsbrink presents the government budget for 1997. For the first time in some years the budget contains no major austerity packages. The budget adjustments proceed faster than assumed earlier and government finances are expected to balance during 1998.

24. Preliminary estimates for the value of the contracts awarded in connection with the construction of Gardemo-

en airport up to June show that 95 per cent has been awarded to Norwegian enterprises. 90 per cent of the value, or Nkr 8.6 billion, has been awarded to enterprises in Oslo, Akershus, Hedmark and Oppland.

25. Figures from the Directorate of Labour show that the number of unemployed fell by 11 500, or 10.8 per cent, in the first half of 1996, compared with the first half of 1995. Long-term unemployment declined faster than other unemployment.

25. Lift fitters are back at work after striking for more than three months. The agreement, which is signed by both the Norwegian Federation of Trade Unions and the Confederation of Norwegian Business and Industry, confirms that the lift fitters' agreement and the electricians' agreement are independent wage agreements, a subject on which there was considerable disagreement during the conflict. The agreement also gives lift fitters a general pay increase of Nkr 1.50 an hour.

27. The lawsuit against Aker after the sinking of the Sleipner platform in 1991 is settled out of court. The original demand was Nkr 2.3 billion, but the case now ends with Aker paying Nkr 320 million. The demand of Nkr 211 million from operators of Sleipner comes in addition, where the parties agree on an out-of-court settlement amounting to Nkr 45 million.

30. The boards of Aker and RGI agree to merge the two companies. The new company, to be called Aker RGI, will concentrate on fisheries, cement/building materials, oil and gas. The company will have 17 900 employees and turnover of about Nkr 20 billion. Shareholders will later decide whether the merger is to materialize.

October

1. For the first time Norwegian gas is supplied to the former eastern bloc when the German (previously east German) gas distribution company Verbundnetzgas (VNG) receives delivery of four million cubic metres of gas. The agreement, which was signed in 1993, will run for twenty years and the gas is worth Nkr 4 billion at current prices.

2. Norsk Hydro awards Saipem UL Limited a contract for the transport and installation of the jacket and deck for Oseberg East. The contract is worth Nkr 270 million.

2. Aukra Industrier signs a contract with Simon Møkster Shipping from Stavanger for building an anchor handling ship. The price is between Nkr 150-200 million.

4. Kværner Construction, in cooperation with Gammon Construction, is awarded a contract for the expansion of the sewerage network in parts of Hong Kong. The contract is worth Nkr 430 million.

8. The Nobel Prize in Economics is awarded to James A. Mirrlees of the UK and William Vickrey of Canada for their contributions to economic literature in the area of incentives under asymmetric information.

10. Kvaerner Boving in the UK wins a contract worth Nkr 220 million for supplying hatches and valves to a power station in India. Kvaerner Energy in Oslo will supply six turbines to the same power station.

10. Kvaerner Tamturbine in Finland will supply turbines to power stations in China and Finland for a total value of Nkr 170 million.

10. Alcatel is awarded a contract from Telenor worth more than Nkr 250 million.

16. Westamarin shipyard in Kristiansand is declared bankrupt. The company is building two ferries for Stena Line and budget overruns of more than Nkr 100 million for the construction of these ferries force the board to declare the company bankrupt. 500 permanent employees and 250 temporary employees lose their job immediately, and creditors lose several hundred millions. The administrators will probably recommend that the first of the two ferries be completed.

17. The shipping company Belships of Oslo buys the British shipping company Gibson Gas Tankers which owns five gas tankers. The ships are valued at a little more than Nkr 400 million.

22. Smedvig wins a contract, worth about Nkr 190 million, with Esso Malaysia for the extension of a drilling contract.

23. Prime Minister Gro Harlem Brundtland announces from the Storting's rostrum that she will submit her resignation to the Council of State on 25 October. Torbjørn Jagland will take over as Prime Minister.

25. Prime Minister Torbjørn Jagland presents his new Government. Jens Stoltenberg is the new Minister of Finance, while Grete Faremo is Minister of Petroleum and Energy. The Ministry of Industry, which was previously part of the Ministry of Petroleum and Energy, is merged with the Ministry of Trade and Grete Knudsen continues as Minister. A Ministry of Planning is also established, to be headed by Terje Rød-Larsen.

25. The parties to the centre reach a budget compromise which reallocates about Nkr 7 billion without resulting in a deterioration in the budget balance. The parties want higher appropriations for family allowances, hospitals and the care of the elderly. The increases shall partly be covered by higher taxes on alcohol, tobacco and petrol. The parties also agree to reject higher expenditure for sick pay for employers and more expensive multi-purpose vehicles.

25. Norsk Gjenvinning Oslo wins a court case against Nes Municipality after having accused the municipality of

breaking EEA rules on public procurement. The municipality broke the rules by awarding the contract to a local enterprise and not to Norsk Gjenvinning Oslo AS, which had the lowest bid.

28. The Storting's Standing Committee on Finance and Economic Affairs completes its report and proposes net additions of about Nkr 6 billion compared with the Government's government budget proposal. Of this amount, Nkr 4.5 billion will go to the municipalities.

29. Through its Dutch subsidiary, Norsk Hydro acquires the Italian company Terni Industrie Chimiche. The acquisition gives Hydro three new fertilizer plants, 700 employees and Nkr 2.5 billion in turnover.

30. Umoe Sterkoder is awarded a contract, worth Nkr 260 million, for building a specialized ship for transporting paper for the Finnish shipping company AB Engship.

31. Consorcio Noruego, which consists of the three Norwegian companies Eeg-Henriksen Anlegg, Kvaerner Energy and ABB Kraft, is awarded a contract worth \$ 42 million to build a hydropower station in Costa Rica.

November

4. Kvaerner wins a contract to build one of the world's largest suspension bridges over the Yangtze River in China. The contract is worth more than Nkr 1 billion.

5. Norsk Hydro submits an application to further develop the Troll oil field with a floating platform that will be given the name Troll C. Total development costs are estimated at Nkr 15.9 billion. The estimates for recoverable oil reserves from the field are increased to altogether 1.17 billion barrels of oil.

6. Norges Bank lowers its deposit rate and overnight lending rate for banks by half a percentage point to 4 and 6 per cent, respectively. The aim of the interest rate reductions is to reduce appreciation pressures on the Norwegian krone.

13. Stolt Comex Seaways is awarded a contract worth \$ 68 million from the Brazilian oil company Petrobras.

14. The Storting votes in favour of converting the Post Office and the Norwegian State Railways from public corporations to wholly-owned state companies.

21. Shareholders in Aker and RGI approve the proposal to merge the two companies (see 30 September).

22. The Kongsberg Group is awarded a contract worth Nkr 100 million from the US aircraft manufacturer Boeing. The contract relates to upgrading software for workstations on board 17 of NATO's AWACS aircraft.

27. Minister of Planning Terje Rød-Larsen submits his resignation as a result of waning confidence in him and the

Government following the decision by the Central Unit for Investigation and Prosecution of Economic and Environmental Crime to investigate the claim that the option agreement he concluded with the fish processing company Fideco was antedated.

27. Langsten Slip & Båtbyggeri is awarded a contract to build an anchor handling vessel for more than NKr 200 million for Farstad Shipping.

28. The Norwegian Fishermen's Union and the state reach agreement on a fisheries agreement for next year. The agreement, which includes transfers from this year, amounts to about NKr 100 million.

28. Ulstein Verft signs a contract worth NKr 150 million with Solstad Shipping to build a supply ship.

29. OPEC decides to maintain the current production quotas for oil for the first quarter of 1997. The quotas, which amount to 25.03 million b/d, include 800 000 barrels reserved for Iraq when the country is permitted to resume sales of oil.

29. The Government presents the final budget bill. In spite of substantial additional budget revenues, it is proposed that taxes be increased to curb the growth in private consumption. Main points include NKr 750 million in a higher wealth tax and NKr 750 million in indirect tax increases. Excise duties will be raised for alcohol, tobacco, petrol and cars. The Government will use about NKr 1 billion more than proposed earlier for health care and care of the elderly, while expenditure will be reduced by postponing government building projects.

29. National Librarian Bendik Rugaas takes over as Minister of Planning after Terje Rød-Larsen.

30. Kværner Masa yards in Finland signs a letter of intent for building one ship with an option for an additional ship for North American-based Royal Caribbean Cruise Lines. The ships will be the world's two largest cruise ships. The contract is worth about \$ 1 billion.

December

3. Saga Petroleum buys the oil company Santa Fe Exploration for \$ 1.2 billion. The company, which is owned by Kuwait Petroleum Corporation, has several exploration licences in the British and Irish sector of the North Sea. The company has stakes in altogether 40 blocks, and reserves are estimated at 200 million barrels of oil equivalents.

Expectations in the Norwegian economy

Ingvild Svendsen

The question of what constitutes a good description of the formation of expectations figures centrally in the critique made by last year's Nobel prize winner in economics, Robert E. Lucas, Jr., concerning the use of macroeconomic models of the type developed by Statistics Norway (e.g. MODAG, KVARTS). The formation of expectations is not explicitly dealt with to any extent in these models, and they may therefore be incorrectly specified on this point and a victim of the Lucas critique. However, the results presented in this article, which are based on Norwegian data, suggest that backward looking expectations mechanisms provide a better description of how expectations are formed than rational expectations.

Economic modelling and the formation of expectations

Many economic decisions are forward looking, and decision-makers therefore form expectations concerning future values of e.g. prices, the level of demand, interest and exchange rates. The way in which these expectations are formed influences how economic agents - and thus the economy - respond to, for example, changes in economic policy and conditions on the world market. To what extent future conditions play a role in decisions taken by economic agents varies according to the type of problem, such as the time horizon of the decision and any possibilities for adjusting one's own choice at a later date. The magnitude of potential losses as a result of wrong decisions and the degree of variations observed historically can also influence the emphasis agents place on expectations concerning the future. Investment decisions are typical examples of choices that have long-term consequences. They are often associated with substantial adjustment costs and the return is largely dependent on the future operating environment, all factors indicating that expectations play a key role. The degree to which importance is attached to future developments will also depend on the market being studied and the strategic position of the agents. It is often assumed that agents operating in financial markets largely base their transactions on expectations and that a trade union is more concerned with inflation expectations than the individual wage earner.

Our knowledge of specific events in the Norwegian economy illustrates that perceptions concerning future conditions can play a role; economic agents do not base their decisions solely on previous and current conditions. Changes in car taxes at the beginning of 1996 had an impact on the demand for cars in the autumn of 1995, first due to the Government's proposals for changes and then as a result of the specific changes people knew with certainty would take place on 1 January 1996. Similarly, the announced introduction of VAT at the beginning of 1970 had effects on the demand for consumer durables in the autumn of 1969. These two examples demonstrate that announced changes

in regime are taken into account. This can be captured in the modelling and use of macroeconomic models in various ways, of which the explicit modelling of the formation of expectations is one. The effects of individual events can be modelled afterwards by using dummy variables, i.e. variables that produce an effect in periods which depart from the normal course. It is difficult to estimate in advance the effect of these individual events, but because we assume that they will have an effect from the moment they are announced, ad hoc adjustments will be made when we prepare forecasts. The adjustments are partly based on the effect of previously announced changes. We can model expectations more explicitly by allowing expected changes in indirect tax rates to be included as explanatory variables in the sub-model for private consumption. The question is how these expectations are to be modelled. We will revert to alternative hypotheses that have been launched later in this article.

Households' reaction to the deregulation of the credit market and the reduction in the value of interest-rate deductions during the last half of the 1990s illustrate, however, that signals concerning future policy changes do not necessarily influence decisions right away. The reregulation resulted in a sharp rise in nominal interest rates. A reduction in the value of interest-rate reductions was also planned, signalled among other things by the presentation of NOU 1984:22, "Personal taxation" and Report no. 35 to the Storting (1986-87) on "Reforms in personal taxation". The change was gradually introduced from the beginning of 1988, first through a reduction in marginal taxes. If we study household behaviour during this period, partly with a view to the propensity to save and house purchases, it appears that the effect of the reform only has a full impact when households themselves notice the changes through their own tax rate and after-tax earnings. In other words they did not act in accordance with the signals concerning future changes in real after-tax interest rates, but rather on the basis of the after-tax interest rate they could observe at any one time. In defence of households it should be noted that these events took place in a period with substantial changes in the framework conditions for the Norwegian and international economy - changes which interacted in a diffuse manner.

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If agents' expectations influence their decisions, expectations are a part of the economic structure and will have an effect on the rest of the economy. Expectations thus have a natural place when modelling the economy. It is difficult, however, to measure expectations, and there are few observations of such variables. Nor are they exogenous, i.e. determined independently of the economic system; they are influenced by what is taking place in the rest of the economy. Observations of agents' expectations are therefore quickly irrelevant. If, for example, we have observations of household expectations today concerning interest rate movements in the period to the year 2000, it is not given that these observations are identical to household expectations one year ahead in time for the same variable. In the course of the year households have received new information that may have changed their interest rate expectations. Assuming that expectations play a role, we are thus confronted with a new type of problem: How do economic agents form their expectations?

The Research Department of Statistics Norway has attempted to quantify relationships between aggregated economic variables. These relationships are incorporated in various macroeconomic models that are used to draw up forecasts for the Norwegian economy and to analyze how economic developments depend on alternative policy options and framework conditions. The analyses can lay the foundation for policy decisions. It is thus an important objective that the models describe the economic relationships as correctly as possible, also after changes in policy and framework conditions have taken place. The models must therefore capture economic relations satisfactorily, including the link between economic policy and behaviour in the private sector. As pointed out by Lucas (1976), the formation of expectations can represent such a link, and the omission of expectations variables or an incorrect modelling of expectations can be one of several sources of incorrectly specified models. However, with few exceptions little emphasis has been placed on modelling the formation of expectations in Statistics Norway's models. This is part of the reason for the empirical analyses to which we refer later in this article, and which study how expectations are formed and the role they play in the Norwegian economy. A more thorough review of the empirical findings is found in Svendsen (1996).

Various hypotheses of how expectations are formed have been launched in economic theory. The most important distinction is between rational and extrapolative expectations. The latter group covers, among other things, adaptive and static expectations.

Rational expectations

According to the rational expectations hypothesis, economic agents use all free, available information optimally. Let x_{t+1}^e be agents' expectations formed at time t of variable x at time $t+1$ and assume that Ω_t contains all the information available to agents when expectations are formed.

We then have the following definition of a rational expectation:

$$x_{t+1}^e = E(x_{t+1} | \Omega_t)$$

A rational expectation is in other words defined as the mathematical expectation for the variable conditional on all free, available information. From this definition follows a number of properties, or conditions, which a rational expectation must fulfil. The most important of these is that the agents' prediction error, defined as the discrepancy between the realization and the prediction, i.e. $x_{t+1} - x_{t+1}^e$ shall not systematically depend on any part of the information that was available when the expectation was formed. This imposes a strict requirement on the agents' ability to process and use information, a requirement that many will assert is unrealistic. It was noted earlier that expectations both influence and are influenced by the overall economic system. Ideally, an agent who forms expectations according to the rational expectations hypothesis shall therefore take into account the entire economic structure, including his own potential influence, and resolve this system given the information available.

The advance effects of introducing VAT and of changing car taxes referred to earlier are examples of announced changes in regime with clear, transparent effects. The advance effect of these changes, however, cannot be cited as support for the notion that agents form expectations in accordance with the rational expectations hypothesis. The third example, the situation in the Norwegian economy in the 1980s, with many changes which influenced each other, illustrates how difficult it can be for agents to base their expectations on an optimal use of all free, available information.

One often-used operational solution in a model context is to set agents' expectations equal to what the model in question predicts, hence the designation model-consistent expectations¹. Viewed in the light of the relevant model, this may appear consistent, but it is more problematic when we take into account the wide array of economic models that provide different descriptions of economic relationships. If we assume model-consistent expectations, we are implicitly saying that economic agents have selected precisely our model in competition with others. Perhaps we approach a more realistic assumption if we assume that agents' expectations are a weighted average of what a larger number of models predict?

The requirements we impose on what is to be included as part of agents' information represent another problem. A minimum requirement could be that agents' own observations of the variable's history and own previous prediction errors shall be included. Moreover, many will say that information passed on through the mass media is free,

¹ A version of Statistics Norway's equilibrium model, MSG, contains model-consistent expectations.

available information. This relates to policy decisions such as the size and distribution of the government budget, tax rates and reforms and the choice of exchange rate regime, to mention a few. For larger agents such as banks and major firms it may be required that they are familiar with economic forecasts drawn up by e.g. the OECD, the Ministry of Finance, Norges Bank and Statistics Norway. The fact that these forecasts often differ and may be based on various perceptions of how the economy functions is a problem in itself. Information which is costly to collect or process either in the form of money and/or use of time makes this additionally problematic. If the benefit is greater than the costs, it will be profitable to obtain this information. However, the benefit of the information is not known until it has been acquired, and if one is to obtain information on this potential benefit it is again necessary to evaluate an unknown utility value against the costs. We can continue along these lines indefinitely, but descend steadily deeper into the paradox of information.

Extrapolative expectations

An extrapolative expectation of a variable is a weighted average of earlier observations of the variable itself. Depending on the emphasis given to observations that are recent or very old, different types of extrapolative expectations emerge. The most well known is adaptive expectations which are given by a geometrically declining series of earlier observations. The most recent observations are assigned the highest weight. Adaptive expectations can also be produced in the following form:

$$x_t^e - x_{t-1}^e = \delta (x_t - x_{t-1}^e)$$

In this form we see that agents' adjustments of their expectations are proportional to the prediction error from the previous period. Consequently, this type of formation of expectations is often referred to as the error-learning model.

Extrapolative expectations differ from rational expectations in that very little information is used, i.e. only the variable's own past history. Further, the hypothesis does not provide any guarantee that this information is used optimally. These models lead to systematic prediction errors in several cases. Adaptive expectations will, for example, systematically underestimate movements during a prolonged upward trend, and conversely underestimate the course during a downward trend. Many reject this type of expectations precisely because they consider it difficult to assume that economic agents make systematic errors over time.

The paradigm of rationality in economic theory is often used as a defence for the rational expectations hypothesis. If we start with the theory for rational choices with the aim of delimiting a rationally formed expectation in order to then see if this corresponds with the rational expectations hypothesis, we will find that a clear-cut definition is questionable. One important reason is that the theory does not provide an operational delimitation of the optimal collection and processing of information. Limited rationality is

possibly a more realistic assumption in connection with expectations, permitting agents to apply relatively simple rules of thumb which, over time, have provided a sufficiently satisfactory result. This is a less stringent rationality requirement than in the rational expectations hypothesis, but does not automatically lead to extrapolative expectations. Intermediate forms that have been proposed expand extrapolative expectations mechanisms to include other variables in addition to earlier observations of the variable. Moreover, both extrapolative and rational expectations can be modified by assuming that agents are in a continuous learning process. They learn from their prediction errors and thereby gradually improve their predictions. These models may prove to be realistic representations of simple rules of thumb used by agents when they form their expectations.

One can classify various types of expectations as irrational, e.g. expectations based on a deliberate or unconscious selection of information which underpins or departs from one's own preferences. Socio-psychological experiments have shown that this often occurs. Similarly, tests (referred to in Svendsen (1993a)) show that exchange rate expectations in Japanese trading companies systematically depended on to what extent a depreciation of the Japanese yen would have a positive or negative impact on the companies.

We have previously shown how the effect of announced future changes can be captured by using dummy variables or by allowing the model user to make ad hoc adjustments. This procedure is not recommended for expectations concerning future oil prices, wage costs, interest rates, exchange rates, etc. Movements in these variables are not announced in advance but depend on other developments in the economy. The formation of expectations should therefore be modelled more explicitly. If economic agents form rational expectations, one must, in addition to allowing expectations to be included as an explanatory variable, introduce relationships in the model for variables to which expectations are linked. This may entail that rules which determine policy variables (government consumption, taxes, etc.) must be modelled. Expectations will be identical to the forecasts provided by the model.

If, on the other hand, we have evidence that expectations are formed extrapolatively, we can accommodate the importance of expectations simply by including earlier values of explanatory variables in the various relationships. The potential effect of extrapolative expectations is precisely one of the reasons for including lagged values in econometric relationships, and it is in this way that expectations are incorporated in models like MODAG and KVARTS.

Significant effects of lagged explanatory variables, however, may also be due to the fact that we are confronted with a relationship that is derived from a model which includes rational expectations. This is the case if the variables for which expectations are formed follow auto-regressive processes, i.e. that each can be modelled as a function of previously realized values of itself. In that case extra-

polative and rational expectations may give rise to identical econometrical relationships. The expectations model used can nevertheless be critical for the validity of the forecasts provided by the model. If there is a change in the process which determines the variables for which expectations are formed, agents who form rational expectations will take this into account, and the derived relationship will not be identical to the original one.

If we use the original relationship in model-based simulations which entirely or in part cover the period after the changes have occurred, the model will produce an incorrect forecast. This is particularly critical if agents act on the basis of rational expectations concerning the authorities' choice of policy, and the models are used to analyze the effect of various choices with regard to this policy. If the expectations are formed extrapolatively, this problem does not arise.

Lucas (1976) focuses on the consequences of an incorrect specification of the formation of expectations in macro-econometric models. If economic agents act on the basis of rational expectations, and this is not taken into account in the models, the introduction of new policy rules will entail that the quantified relationships no longer apply. This argument is called the Lucas critique and is used by some to reject macroeconometric models which do not assume rational expectations. The Lucas critique is also a special case of the lack of autonomy in relation to changes in the rest of the system, a subject studied by both Haavelmo and Frisch (Haavelmo (1944) and Frisch et al. (1948)). More recent research in econometric methodology shows that it is possible to test whether the Lucas critique is relevant for an estimated relationship, and thus also whether the underlying model contains rational expectations. In this literature an incorrect omission of rational expectations is only one of several possible explanations as to why econometric relationships are not invariant to changes in other parts of the economy (Hendry (1988) and Engle and Hendry (1993)).

To what extent expectations play a role in various parts of the economy and how they eventually are formed is an empirical question. Wrong or inadequate modelling of agents' expectations produce models which are not very robust and which can lead to incorrect conclusions in our analyses. It is important to note that an incorrect assumption of rational expectations can also result in an incorrectly specified model. Empirical studies of the formation of expectations are thus required. In the following we shall concentrate on empirical results, primarily obtained using Norwegian data. An important distinction in empirical studies of the formation of expectations is between works which use direct observations of agents' expectations (direct tests) and studies that do not have this type of data, but test economic models given assumptions on the formation of expectations (indirect tests). We shall present results from the use of both approaches.

Analyses of expectations using the General Business Tendency Survey

Statistics Norway's General Business Tendency Survey presents quarterly data on Norwegian firms' expectations concerning price movements for their own products in the domestic and export markets and the demand for the same products in the two markets. Information from the survey has previously been used very little for analytical purposes. In Svendsen (1993b) and (1994), these data form the basis for empirical tests of expectations mechanisms. Data from the period 1974 to 1990 are used. The data are categorical, i.e. in the form "expected increase/no change/decrease".

Various methods to cope with categorical data in empirical tests are launched, of which three are discussed in Svendsen (1993a). Two of the methods use the categorical micro-observations to provide a quantitative estimate of agents' average expectations in order to test expectations hypotheses based on these estimates. The problem is that the assumptions made in the transition from categorical micro-observations to quantitative estimates at an aggregated level can influence the conclusions drawn. The third method uses the categorical micro-observations and tests the hypotheses across agents at a given time (cross-section analysis) with the help of methods for categorical data. It is this strategy we have chosen to follow here. The method imposes some limitations on which hypotheses can be tested.

Categorical data provide relatively limited information. If agents report an increase, the survey tells us nothing about the magnitude of this rise. A report of unchanged prices or demand covers an interval around zero per cent change if the respondents have a limit for the magnitude of the change they must observe or expect before they classify it as an increase/decrease. We use the data to construct measures of prediction errors and adjustments of expectations from one quarter to the next. Inasmuch as the basic material is categorical, our category "no prediction error" only covers those cases in which the firms later report that they have observed the same direction of a variable's path from time t to $t+1$, which they beforehand reported that they expected. We do not capture prediction errors of the type "expect 10 per cent increase, but observe later a 2 per cent increase". On the other hand, we classify the following as

Table 1. Number of periods with rejection¹⁾ of rational expectations (total 44 periods)

	Price of firm's product on		Demand from	
	Home market	Export market	Home market	Domestic market
Test I ²⁾	37	34	42	35
Test II ³⁾	15	14	23	14
Test III ⁴⁾	6	5	34	28

1) H_0 : Prediction error and earlier observation of the variable are distributed independently.

2) Test I: Likelihood ratio test of H_0 .

3) Test II: Test of H_0 based on parameters for bivariate interaction from a loglinear probability model (see Box 2).

4) Test III: Test of H_0 based on parameters for bivariate interaction from a loglinear probability model (see Box 2) and with H_1 : positive association.

an overestimate: "expect 2 per cent increase but later observe a 2 per cent decrease". If we instead use the categorical data to obtain quantitative estimates of the firms' aggregated expectations and observations, we ostensibly also obtain information on the size of the prediction errors. However, the content of information in a given set of data does not increase when it is transformed unless new information is provided at the same time. In addition, the quantitative estimates represent aggregated values with a loss of micro-information.

The firms report to the General Business Tendency Survey on their observations through the past quarter and their expectations for the next quarter. This is naturally a relatively short time horizon. The firms have, on the other hand, a fairly large volume of information when they form their expectations, so that there is less chance that unexpected events shall occur and cause deviations between expectations and realization. Confronted with such a short time horizon, the difference between plans and expectations becomes relevant to the interpretation of results. Statements on price movements from the current to the next quarter can, for some firms, be more of the nature of plans rather than an expectation. For some, this is because they exercise such power in their respective markets that they themselves participate in setting the price. To the extent they afterwards report a different trend, this may be because they have incorrectly predicted developments in areas that have a bearing on the price they set. Other firms produce on the basis of signed contracts and will therefore have full knowledge of their own product's price one quarter ahead.

Svendsen (1993b) tests different properties that shall be fulfilled under the hypothesis of rational expectations, and finds that these properties are not fulfilled to any extent. An important property is that the information contained in earlier observations of the variable shall be used efficiently. This information is a minimum of what can be considered free, available information. Based on the firms' information reported to the General Business Tendency Survey on expected movements from time t to $t+1$ (given at time t) and observed movements from t to $t+1$ (given at time $t+1$), we have constructed a categorical measure of each firm's prediction error². As discussed above, this is a relatively rough measure. The various statistical measures we use and which are shown in table 1 are calculated on the basis of how the combination of firms' prediction errors and their latest observation of the variable's actual movement is distributed in a cross-table³. Under the hypothesis of rational expectations, the firms' prediction errors shall be independent of their most updated information on the variable's movement. If we do not reject independence, we

² The measure of the firm's prediction error is the categorical parallel to $x_{t+1} - \hat{x}_{t+1}$.

³ The cross-table provides nine possible outcomes for each firm depending on to what extent they (i) have overestimated, correctly estimated or underestimated and (ii) previously have observed an increase, no change or decrease (see Box 1).

Box 1. Likelihood ratio-test

We observe the outcome for two variables for each firm. Each variable can take on one of three possible categories, specified by $s, k=1, 2, 3$ ¹. This gives rise to a cross-table with nine possible outcomes.

	Previously observed direction:		
	up = 1	unchanged = 2	down = 3
Prediction error:			
underestimated = 1	m_{11}	m_{12}	m_{13}
correctly estimated = 2	m_{21}	m_{22}	m_{23}
overestimated = 3	m_{31}	m_{32}	m_{33}

We let m_{sk} be the number of firms with the outcome combination (s, k) , whereas n_{sk} is the number we obtain if the outcome for the two variables is independent of each other (our null hypothesis). The likelihood ratio test observer is given by

$$LR = 2 \sum_{s=1}^3 \sum_{k=1}^3 m_{sk} \log(m_{sk}/n_{sk})$$

and follows $\chi^2(4)$ -distribution.

¹ We assign the values of the various categories, e.g. "up" value 1, "unchanged" value 2 and "down" value 3.

must exercise caution in drawing the conclusion too far in the direction of support for the rational expectations hypothesis as we are testing for an efficient use of a very limited volume of information. A complete test of rational expectations requires a test of independence between the prediction error and all free, available information, which in practice is not possible.

The likelihood ratio test (test I in table 1) is a measure of the difference between the observed distribution in the cross-table of the firms' reports and the distribution we would have obtained if expectations were formed in accordance with the rational expectations hypothesis (described further in Box 1). Table 1 shows the number of periods in which rational expectations are rejected, and we see that test I results in rejection in more than three fourths of the periods. In these periods there is a systematic variation in the distribution of the firms' prediction errors and their earlier observations. This systematic variation entails that the firms could have used the information contained in their own earlier observations more efficiently in order to reduce their prediction errors.

The distribution of the firms' reports on prediction errors and earlier observations in the cross-table is a result of how the two variables (the firms' prediction errors and earlier observations) are distributed independently of each other and of the interaction between them (bivariate inter-

Box 2. Loglinear probability models

π_{sk} is the relative frequency for firms with the outcome combination $\{s, k\}$. We estimate the parameters, u_s , u_k and u_{sk} in the loglinear probability model

$$\log(\pi_{sk}) = \mu + u_s + u_k + u_{sk}$$

where μ = the average of $\log(\pi_{sk})$ over $s, k=1, 2, 3$

u_s (u_k) = the deviation to $\log(\pi_{sk})$ from μ which we ascribe to the marginal distribution of variable 1 (variable 2).

u_{sk} = the deviation to $\log(\pi_{sk})$ from $\mu + u_s + u_k$ which we ascribe to bivariate interaction between variable 1 and variable 2.

H_0 : Independence between variabel 1 og variabel 2: $u_{sk} = 0$ for all s, k .

For the error-learning model we estimate an ordinal-nominal loglinear probability model.

$$\log(\pi_{sk}) = \mu + u_s + u_k + \beta_s(k-2)$$

β_s captures the effect of the bivariate interaction which for a given category s is assumed to be linear in the value for k . We distinguish between three cases:

$\beta_s = 0$ for alle s : Variabel 1 og variabel 2 are distributed independently of each other.

$\beta_3 - \beta_1 > 0$: Positiv association. A high value for k ($k > 2$) results in increased probability for a high value for s .

$\beta_3 - \beta_1 < 0$: Negative association. A high value for k ($k > 2$) results in decreased probability for a high value for s .

action). It is the interaction in which we are interested. Test II is calculated only by using the measure of bivariate interaction, computed with the help of loglinear probability models (see Box 2). We see that rational expectations are rejected more seldom using this measure, in from a third to half of the periods. If we find a relationship between prediction errors and earlier observations, a knowledge of the direction of the association can provide us with increased knowledge about the formation of expectations. Is it the case, for example, that firms which have recently observed a rise in prices overestimate future movements, i.e. do they expect higher prices than what is actually the case? This can be tested when the categorical data are ordinal, that is that the various categories can be arranged according to a scale. Our categories, up/unchanged/down and overestimation, correct estimation, underestimation, form a meaningful scale. In test III, we test whether association has a significant direction, which would result in a rejection of rational expectations. The systematic association suggested by test I and in part test II seldom has a clear-cut direction for the two price variables according to test III. For the two demand variables we find a significant direction in a majority of the periods, but in all these periods the association is towards underestimating (over-

Table 2. Number of periods with support for the error-learning model¹⁾ (total 44 periods)

	Price of firm's products on		Demand from	
	Home market	Export market	Home market	Domestic market
Test IV ²⁾	44	44	44	44
Test V ³⁾	44	44	6	44
Test VI ⁴⁾	22	29	6	8

1) H_0 : No relationship between adjustment of expectations and previous period's prediction error.

2) Test IV: Likelihood ratio-test of H_0 .

3) Test V: Kruskal og Goodmans gamma-test of H_0 against H_1 : Positive association.

4) Test VI: Likelihood ratio test of restrictions imposed on an ordinal-nominal loglinear probability model. In all periods in which these are valid, H_0 is rejected: No association, to the advantage of H_1 : Positive association.

estimating) changes in the light of recently observed increases (decreases). The results for the two demand variables therefore indicate that the formation of expectations is regressive, i.e. firms expect demand to return to its previous level following a period of increases/decreases. For firms in our sample this expectations mechanism gives rise to systematic prediction errors, and the rational expectations hypothesis must be rejected. The conclusion is clearer for demand variables than for price variables.

Another property of rational expectations is that the prediction error shall not deviate systematically from zero over time. If this property is tested on a cross section, an unexpected event which influences e.g. demand or prices for everyone in the sample can result in systematic deviations, and the test can thus not be used to reject rational expectations. This is a problem with the methodology we have chosen.

Having rejected rational expectations, it is relevant to ask whether extrapolative expectations models provide a better explanation. Statistical tests of different variants of extrapolative expectations and statistical measures which describe the data indicate that the near future is of importance when expectations are formed, particularly for price expectations and expected demand in export markets (Svendsen (1994)). Observations in the previous quarter and four quarters back in time have a far greater weight for expectations according to likelihood ratio tests reported in Svendsen (1994) than information from intervening periods. This suggests that firms attach considerable importance to the most recent information, but that they also take into account seasonal variations in price changes and demand. Again, the results indicate that firms form regressive expectations for demand in the domestic market.

Table 2 summarizes the results of tests of the error-learning model, a sub-group of extrapolative expectations. The

⁴ A revision of the expectation is the categorical parallel to $\mu_{t+1}^e - \mu_{t-1}^e$. The previous period's prediction error is the categorical parallel to $x_t - \mu_{t-1}^e$.

tests are based on cross-tables where the firms' revision of expectations and the prediction error in the previous period⁴ constitute the two variables. When the error-learning model applies, we should expect to find an association between these two variables in such a way that if the direction of change was underestimated (overestimated), an upward revision (downward revision) of expectations should take place. In other words, the expectations model provides a clear direction of association. The results from test IV entail that the null hypothesis of no association is rejected in all periods for all four variables. The alternative hypothesis shows no direction of association. In test V the alternative hypothesis is positive or negative association between the variables and we find that association heads in the direction implied by the error-learning model (positive association) in periods where the null hypothesis is rejected. This applies to all periods for three of the variables, while the results for demand in the domestic market deviate with a significant direction of association in only six periods. We have also tested association and its direction based on loglinear models where we take advantage of having ordinal variables (see Box 2; ordinal-nominal log-linear probability model). These models, which are further described in Svendsen (1994), impose some restrictions on association in the statistical material. Test VI is thus a test of the validity of these restrictions, and we see that they are not rejected in about half of the periods for the two price variables, but for far fewer periods for the demand variables. Given that the model restrictions are not rejected, we reject independence between the two variables, and we again gain support for association in accordance with the error-learning model.

Svendsen (1993a) provides a survey of international empirical studies that test different models for the formation of expectations by using direct methods. The review of these studies concludes that a majority reject the rational expectations hypothesis in favour of various extrapolative expectations mechanisms. The studies included in the survey cover expectations formed by different types of economic agents: firms, consumers, leading economists and agents in international markets. Both categorical and quantitative data are used. The expectations are linked to demand for one's own product, macroeconomic variables such as inflation, unemployment, gross domestic product, wage growth, investment and exchange rates. Inasmuch as agents in international markets manage considerable resources, have good access to information and have sizeable potential losses if they make incorrect assumptions concerning future movements in various exchange rates, it is often assumed that these agents' expectations will be in accordance with the rational expectations hypothesis. Findings in other countries (including the US, the UK and Japan), however, indicate that these agents also make systematic errors.

Do expectations influence price formation?

Whereas Svendsen (1993b) and (1994) uses the direct method for testing expectations hypotheses, expectations hypotheses are studied indirectly in Svendsen (1995a) and (1995b). The starting point is estimated price relations for an aggregate consisting of goods and services produced by private enterprises in the mainland economy and sold on the domestic and export market, respectively. Time-series data from the quarterly national accounts are used. With indirect testing of expectations hypotheses no data are available for the agents' expectations. The procedure we use is to formulate a model for price formation in which expectations concerning the future path for production costs and the price set by foreign competitors for their products have an influence on the price of Norwegian products. We then make specific assumptions as to how expectations are formed. We end up by testing a model which is a combination of a price formation theory and an expectations hypothesis. If the model is rejected, it is thereby not given that it is the expectations hypothesis that is incorrect.

We compare two different price models. Both are based on the same fundamental theory of price formation, the theory of imperfect competition. According to this theory, we assume that Norwegian firms have a certain degree of market power and can thus influence the price. Market power can be justified on the grounds that commodity aggregates produced in different countries are not perfect substitutes or that Norwegian producers have influence in certain markets based on their market shares. The price of the product will depend on production costs and the price of competitors' products⁵. The question is to what extent there are expectations concerning these two factors which influence product prices or whether the firms make decisions based on what they can observe when decisions are taken.

We make no specific assumptions in the first model (model A) as to what extent expectations play a role, and how they are formed. Model A is in accordance with a number of different assumptions on expectations, which may have come about both by the agents acting on the basis of expectations and by gradually adjusting over time in the direction of an optimal price given changes in external events that have occurred in earlier periods. If they act on the basis of expectations, these may be formed extrapolatively, but also according to the rational expectations hypothesis given that the variables around which the expectations are formed follow an extrapolative process. As noted earlier, if the latter is the case, the model will not be autonomous to changes in the process that controls the external variables.

In model B, we assume explicitly that expectations are of importance and that they are formed according to the rational expectations hypothesis. We assume that the firms are confronted with a quadratic loss function where they incur

⁵ We disregard any effects from the level of demand and/or production.

a loss both if they change the product price from one period to the next and if it deviates from its optimal level. If we allow the optimal price to depend on production costs and competitors' prices, expectations of the future path of these variables will have a bearing on current price decisions. If the firms expect the price of factor inputs to increase in the periods ahead, it may be profitable to increase their own prices in advance to avoid substantial price hikes at a later time. On the other hand, the effect of a rise in costs may be zero if the firms expect the increase to be temporary. Model B, however, which is explicitly derived from a rational expectations model, provides a poorer description of price formation than model A according to our empirical results. This is true both when the product is sold on the domestic market (Svendsen (1995a)) and on the export market (Svendsen (1995b)). The conclusion still holds if we relax the relatively stringent restriction imposed by quadratic loss functions and instead let rational expectations be included less restrictively in the price functions. The indirect tests thus do not provide any special support for the rational expectations hypothesis. It must be noted that results of this type of tests are conditional on the other assumptions we make with regard to price formation and how expectations are introduced.

What have we learned - further studies

The role for expectations and how these are formed are an important subject for understanding how the economy functions. As it is difficult to measure economic agents' expectations, studies of the formation of expectations place considerable demands on the use of method. The problems of testing simultaneous hypotheses and identification problems between various expectations hypotheses entail that expectations should be analyzed from different approaches and for different agents. Our results do not point unequivocally in the direction of rational or extrapolative expectations. Due to the identification problem, we cannot interpret support for extrapolative expectations as a rejection of rational expectations. The rational expectations hypothesis must be analyzed separately. In the indirect studies, the conclusions are influenced by the other assumptions we made. The direct tests are based on categorical data which provide relatively general information on firms' expectations, prediction errors and revisions of expectations. In addition, test II of rational expectations entails that the hypothesis is rejected in less than half of the periods. But, as noted earlier, we only test to what extent a limited volume of information is used efficiently, i.e. the information embodied in the last observation of the variable. Even though we cannot draw a clear-cut conclusion, the results provide more support for extrapolative than rational expectations. This reinforces confidence in models like MO-DAG and KVARTS. Rational expectations are not present in these models, but an extensive use of lagged explanatory variables probably captures extrapolative expectations mechanisms to the extent they exist in the Norwegian economy. Further studies of the formation of expectations are required to reinforce or weaken the validity of this conclusion.

The possibilities for analyses based on Statistics Norway's General Business Tendency Survey have been far from exhausted. Among other things, the methods for constructing quantitative expectations series based on categorical material make it possible to test expectations hypotheses directly with the help of time-series econometrics and to estimate aggregated models where the constructed expectations series are included as explanatory variables. With the help of the indirect method we have so far only studied expectations connected to price formation and the demand for labour. Other possible areas of study include wage formation and interest and exchange markets. Moreover, relations that are included in existing macroeconomic models for the Norwegian economy should be tested for the relevance of the Lucas critique. The various tests of expectations hypotheses provide information on the probability that various factors influence the formation of expectations. Alternatively, we can make use of questionnaires to obtain information on what the agents themselves feel they attach importance to when expectations are formed, and the role their expectations have. Analyses of such statistical material will provide useful insight concerning the importance of expectations in the economy.

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General government finances in Norway in an international perspective*

Jon Petter Nossen

The article compares the general government financial position in Norway with EU countries, the US and Japan based on the Maastricht Treaty's convergence criteria. The main conclusion is that general government finances in Norway are far more favourable than in most countries being compared. This is reflected, among other things, in the fact that Norway satisfies the Maastricht criteria for the government deficit and government debt, whereas Luxembourg at the moment is the only EU country to satisfy both criteria. Since 1990, government financial assets have exceeded government liabilities only in Norway and Finland. The reason is that the budget balance for many years has been more favourable in Norway than in other countries, which is, at least in part, due to the state's sizeable net revenues from petroleum activities.

Introduction

The main purpose of this article is to compare the general government financial position in Norway with EU countries, the US and Japan. The comparison is mainly based on the Maastricht Treaty's convergence criteria for EU countries' government finances, and we will also look at to what extent EU countries satisfy these requirements. It must be emphasized that Norway, the US and Japan are not under the obligation to satisfy the Maastricht requirements, which only apply to EU Member States.

The Maastricht Treaty was signed by the EU Member States in 1992. It was decided to establish an economic and monetary union (EMU) which would be implemented in three stages. Stage 3 entails the introduction of a common currency. The treaty set out guidelines for Member States' eligibility to participate in the monetary union. The requirements are specified in four convergence criteria, which can be formulated as follows:

1. Price inflation must be no more than 1.5 percentage points above the average of the three Member States with the lowest rate of inflation.
2. Nominal long-term interest rates must be no more than 2 percentage points above the average of the same three Member States.
3. The exchange rate must have been stable for the last two years.
4. The government budgetary position must be acceptable. This is specified by requiring that the ratio of the planned or actual general government deficit to gross domestic product (GDP) shall not exceed 3 per cent and

the ratio of general government debt to GDP should not exceed 60 per cent.

One interpretation of the convergence criteria is that they shall in part ensure that the new common currency will be a "strong" currency, i.e. that it will have a stable, possibly rising value against other currencies, and in part to provide sufficient economic leeway for EMU. To achieve this, it is considered essential that countries which introduce the new currency have sufficiently low price inflation, low interest rates, a stable exchange rate and sound government finances. Based on the current situation, the convergence criteria impose stringent requirements on the economic situation and economic policy, although it is uncertain how strictly the criteria will be interpreted when the final evaluation is made. At the time of writing, it is the intention to assess which countries satisfy the criteria at the beginning of 1998, based on key economic variables for 1997. Forecasts for future developments, however, will not be discussed in this article¹.

In the article, we will concentrate on the two criteria for the general government financial position, i.e. the requirements concerning the government deficit and debt. These are defined further in the first section which is followed by a discussion of to what extent international statistics are in accordance with the definitions.

With the help of data for 1995, we will then show to what extent Norway and the other countries satisfy the criteria, and examine developments between 1972 and 1995.

In the third section of the article, the perspective is expanded somewhat by focusing on the relationship between deficits and debt and the relationship between budget balance and the level of expenditure and revenues. Moreover, available material on general government financial assets and liabilities in the various countries is discussed.

* My thanks to Paal Sand for his comments on earlier drafts.

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¹ Forecasts for 1997 are presented *inter alia* in Statistics Norway (1996b).

The criteria for general government finances

The criteria for general government finances have proved difficult to satisfy, but they are not formulated as absolute requirements. The text of the treaty states that derogations may be granted to the extent that the deficit level is "close to the reference value" and it has declined "substantially and continuously", or the excess over the reference value is "exceptional and temporary". Moreover, derogations can be granted for the debt requirement if the ratio "is sufficiently diminishing and approaching the reference value at a satisfactory pace". The primary emphasis is placed on the criteria for the government deficit. In this article we disregard this distinction and consider the reference values for the government deficit and debt as two separate and equal criteria. The concepts are defined in the Maastricht treaty as follows:

Government deficit

Government deficit means the total general government deficit, that is the sum for central government, regional or local government and social security funds. The deficit is defined equal to net borrowing, i.e. financial saving measured negatively.

Government debt

Government debt means total gross debt at nominal value outstanding at the end of the year and consolidated between and within the sectors of general government. The use of gross debt entails that financial assets shall not be deducted from the debt. Consolidated debt means that debt between sub-sectors within general government shall not be included. Nominal value is chosen because there is considerable uncertainty attached to market value figures for securities.

Basically, net debt would have been a more relevant debt indicator, partly because the indicator shall be viewed in connection with net borrowing. Positive net borrowing can just as well be reflected in reduced financial assets (e.g. by drawing on the central government's deposits in the central bank) as higher debt. Nor would it have been necessary, using net debt as a debt indicator, to consolidate the figures. However, the choice of gross debt might be due to a desire to avoid the problems connected to the delineation and valuation of financial assets.

Sources of data

In the following we shall look more closely at the sources of the data on government finances in Norway, EU countries, the US and Japan. Figures for EU countries were obtained from the EU Commission's latest publication in the autumn of 1995, see EU Commission (1995a and 1995b). One exception applies to the deficit in Germany in 1995, which is a more recent estimate published by the German Government (Dagens Næringsliv, January 1996). For Norway, Statistics Norway's own figures have been used. The

figures for the US and Japan were obtained from the OECD (1995a and 1995b).

In general, both the authorities in each country, the EU Commission/Eurostat and the OECD publish accounts figures, estimates and forecasts for the government deficit and gross debt. All these sources have the same definition of budget deficit. Accounts figures for the government deficit shall therefore be the same irrespective of which source is used. Estimates and projections, however, will vary depending on the choice of source.

With regard to government gross debt, there are unfortunately different definitions between the various sources. Statistics Norway's figures for Norway are in accordance with the Maastricht definition, except that the actual delineation of debt is based on the UN's new national accounting standard, System of National Accounts ("SNA 1993"). In the statistics from the EU Commission, Eurostat and the various EU Member States, on the other hand, the delineation of debt is based on the EU's old national accounting standard, The European System of National and Regional Accounts ("ESA 1979"). The differences between these two delineations of debt, however, are limited to just a few elements that are of little importance to Norway, entailing that the figures for Norway can, in a definitional context, be said to be on a par with the figures for EU countries.

Furthermore, the statistics from the OECD are based on the delineation of debt in the old UN standard ("SNA 1968"), which is generally the same as in SNA 1993. However, the figures are stated at market value and not at nominal value, which is specified in the Maastricht treaty definition. Moreover, the OECD's figures are based on available, published material from each member country, and they are consolidated only to the extent permitted by the basic data. Figures for the US and Japan which are used in this article are therefore not completely comparable to the figures for Norway and EU countries.

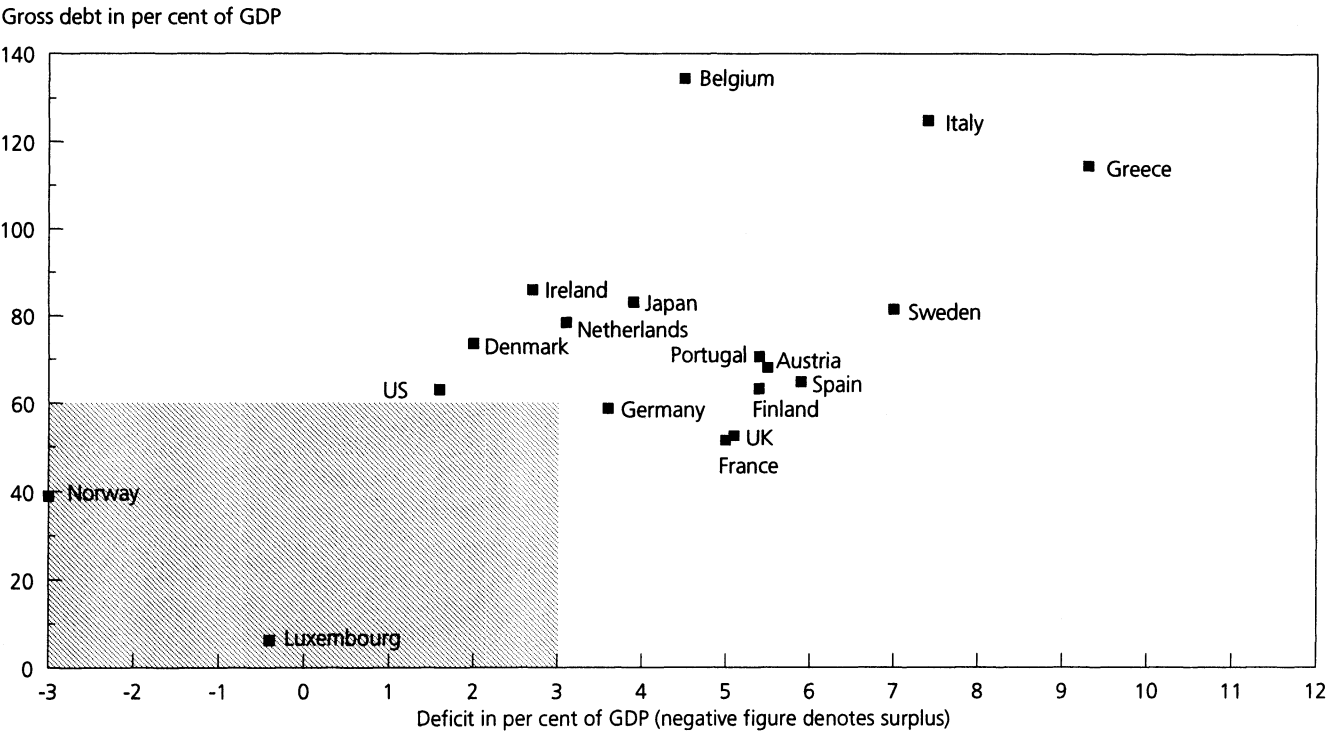
Differences in the delineation of debt between the SNA and ESA are expected to be eliminated as soon as the EU countries have adapted their statistics to the EU's new standard European System of Accounts ("ESA 1995"), which is consistent with the SNA 1993. This will occur in 1999.

The situation in 1995

Table 1 shows government deficit and gross debt in 1995 for Norway and EU countries as well as the US and Japan. Bold type indicates that one or both criteria have been satisfied. Figure 1 provides a graphical presentation of the same.

Only Norway and Luxembourg satisfied both criteria, if the reference values are considered absolute requirements. The same two countries are also the only ones where the general government sector actually recorded a surplus in 1995 and where the government gross debt was less than

Figure 1. General government deficit and gross debt in per cent of GDP. Norway, EU countries, the US and Japan. Preliminary estimates for 1995¹⁾



1) The shaded area denotes that both criteria are satisfied.
Source: Statistics Norway, EU Commission and OECD.

Table 1. General government deficit and gross debt in per cent of GDP. Norway, EU countries, the US and Japan. Preliminary estimates for 1995

	Deficit	Gross debt
Reference value	<3,0	<60
Norway	-3,0	39
Luxembourg	-0,4	6
US	1,6	63
Denmark	2,0	74
Ireland	2,7	86
Netherlands	3,1	78
Germany	3,6	59
Japan	3,9	83
Belgium	4,5	134
France	5,0	52
UK	5,1	53
Finland	5,4	63
Portugal	5,4	71
Austria	5,5	68
Spain	5,9	65
Sweden	7,0	81
Italy	7,4	125
Greece	9,3	114

Source: Statistics Norway, EU Commission and OECD.

40 per cent of GDP. Among the other EU countries, only Germany can be said to have been close to fulfilling both requirements. Germany's gross debt in 1995 marginally satisfied the requirement while the deficit was slightly higher at 3.6 per cent of GDP. Moreover, Denmark and Ireland satisfied the deficit criterion, and France and the UK in addition to Germany the debt criterion. The other EU countries did not satisfy either requirement in 1995. Belgium, Greece and Italy all had a government gross debt of more than 100 per cent of GDP.

tion to Germany the debt criterion. The other EU countries did not satisfy either requirement in 1995. Belgium, Greece and Italy all had a government gross debt of more than 100 per cent of GDP.

For the sake of comparison, it can be noted that Japan, with a government deficit of nearly 4 per cent of GDP and a government gross debt of more than 80 per cent, did not satisfy either requirement. For the US, the figures were 1.6 per cent and a little more than 60 per cent, i.e. the US was very close to satisfying both requirements.

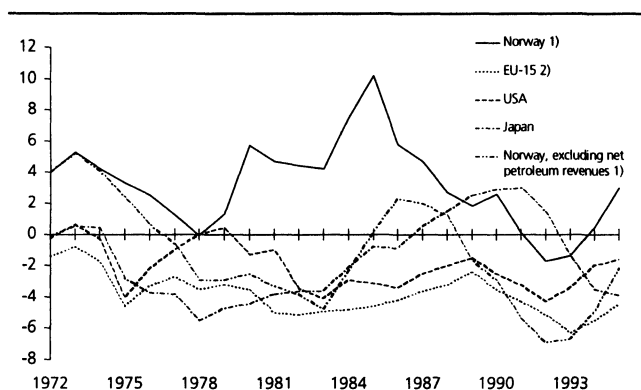
Developments in the period 1972 to 1995

Figure 2 shows the general government budget balance in the period 1972-1995 for Norway², the US, Japan and the average of EU countries. In general the budget balance has been far better in Norway than in the other countries, with the exception of a few years around 1990 when Japan recorded higher surpluses.

In 1972, Norway, the EU, the US and Japan all satisfied the deficit criterion. This was also the case as late as 1989 when the EU on average and the US both had a deficit of

² In the time series for Norway there is a break from 1987 to 1988 because the revision of the national accounts and financial statistics have not yet been carried further back than to 1988. The effect of the revision on general government net lending, however, is relatively limited.

Figure 2. General government budget balance in per cent of GDP. Norway, the EU, the US and Japan. 1972-1995



1) Break from 1987 to 1988 due to revision of the national accounts and financial statistics.

2) 1972-1978: Excluding Greece, Luxembourg, Portugal and Sweden.
1979-1990: Excluding Luxembourg.

Source: Statistics Norway, EU Commission and OECD.

Figure 3. General government gross debt in per cent of GDP. Norway, the EU, the US and Japan. 1988-1995

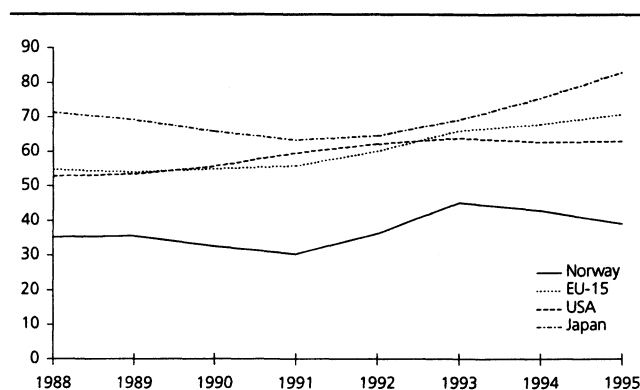


Figure 3 shows the general government gross debt from 1988 to 1995. For the period as a whole, debt as a per cent of GDP increased in all the countries. In Norway, it rose from 35 per cent in 1988 to 45 per cent in 1992, but then declined slightly to 39 per cent in 1995. The EU recorded a sharp rise, from 55 per cent on average in 1988 to 71 per cent in 1995, and in the US it rose from 53 per cent to 63 per cent. Japan had the highest debt level throughout the period, reaching as much as 83 per cent of GDP in 1995.

Developments in recent years have differed somewhat between countries. Since 1993 the debt ratio fell slightly in Norway, whereas it was stable in the US, rose slightly in the EU and increased sharply in Japan.

The figure also indicates that it takes time to achieve substantial reductions in the debt ratio. An improved budget balance, either as a result of a tighter fiscal policy or a cyclical upswing, will not have a strong impact on the gross debt in the short term. Normally, several years of surpluses are necessary before there will be any substantial reduction in the gross debt. In the absence of an unusually strong cyclical upturn, the EU countries as a whole will thus experience problems in achieving the reference value of 60 per cent of GDP before the turn of the century.

The relationship between the two criteria

The general government budget balance and gross debt are linked together in several ways. First, any deficit will often be financed by borrowing. Gross debt will thereby rise, but not necessarily measured in per cent of GDP. An alternative would be to cover the deficit by drawing on e.g. deposits in the central bank so that the gross debt is not affected. Second, a high (net) debt will result in high (net) interest payments, which in turn will make a negative contribution to the budget balance. A country with a high government net debt is normally burdened by high net interest payments, and will have to conduct a very tight fiscal policy in order to achieve balance or a surplus.

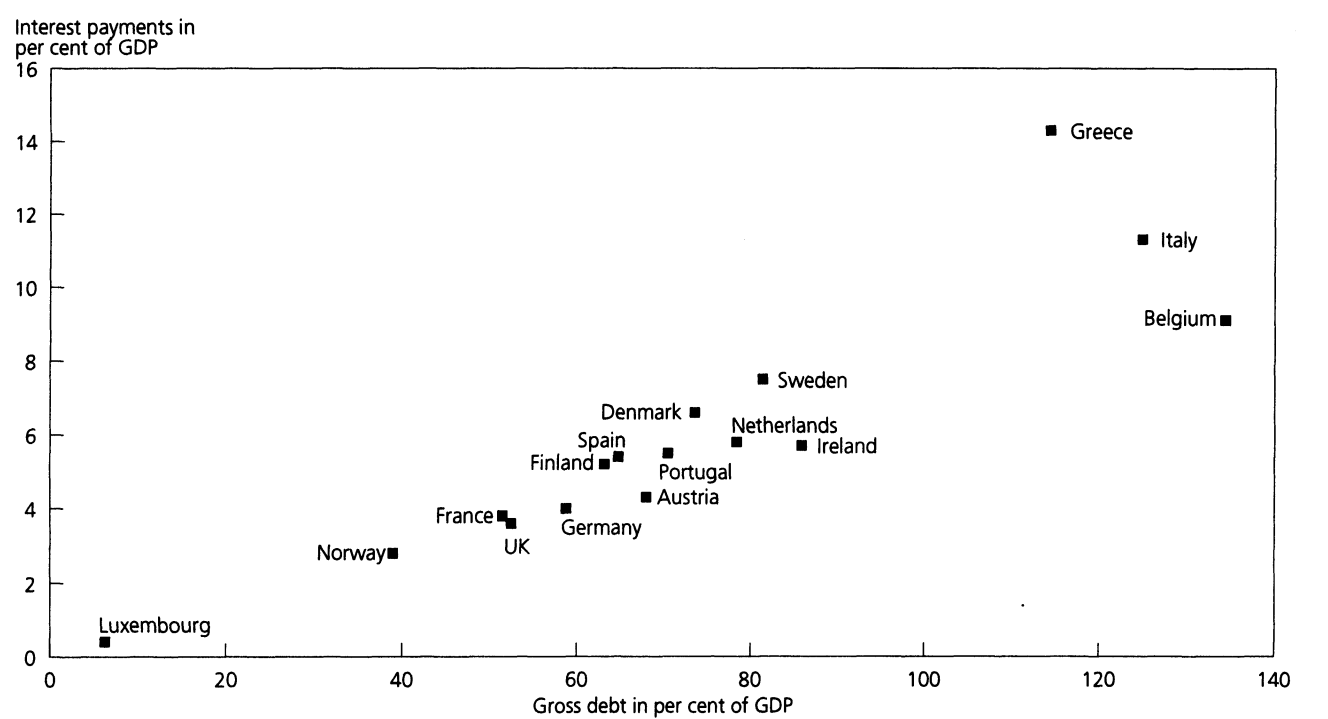
about 2 per cent of GDP, whereas Norway and Japan recorded a surplus of the same magnitude. At the beginning of the 1990s developments were rather similar in all countries, with a substantial deterioration in the budget balance. The weakening, however, was slightly smaller for Japan than for the other countries. In 1992-1993, Norway, the EU and the US all recorded a record-high deficit, averaging for EU countries more than 6 per cent of GDP.

After 1992 Norway and the US experienced a cyclical upturn and an appreciable strengthening of the budget balance, and in 1995 the position in both countries had approximately returned to the 1988 level. For EU countries, the upturn started later and has so far been weaker. Developments in Japan differed from the other countries in that the budget balance continued to deteriorate sharply in both 1993 and 1994, and to a lesser extent in 1995. In 1995, Japan's budget deficit was approximately on a par with the EU average.

The figure also shows the budget balance in Norway excluding net petroleum revenues, in per cent of GDP. Net petroleum revenues are defined here as petroleum taxes, net revenues from the state's own petroleum activity, as well as dividends from Statoil.

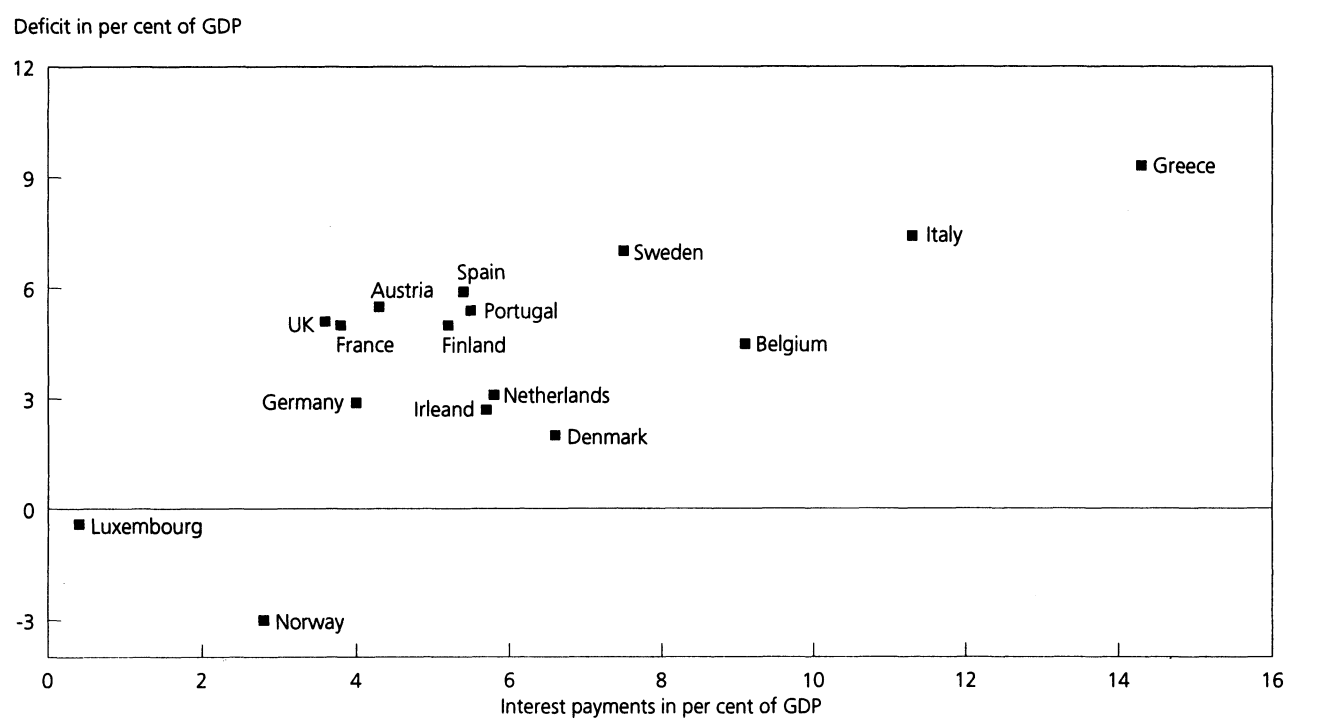
The budget balance less the state's net petroleum revenues deteriorated sharply at the beginning of the "oil age" in the mid-1970s, and thereafter generally remained at the level of budget balance prevailing in the EU, the US and Japan. In the period 1984-1988, however, the non-oil budget balance was far better than the budget balance in other countries, and in 1985-1988 there was a surplus even when net petroleum revenues are deducted. In recent years the non-oil deficit has again remained around the level of deficit for the other countries.

Figure 4. General government gross debt and interest payments in per cent of GDP. Norway and EU countries.
Preliminary estimates for 1995



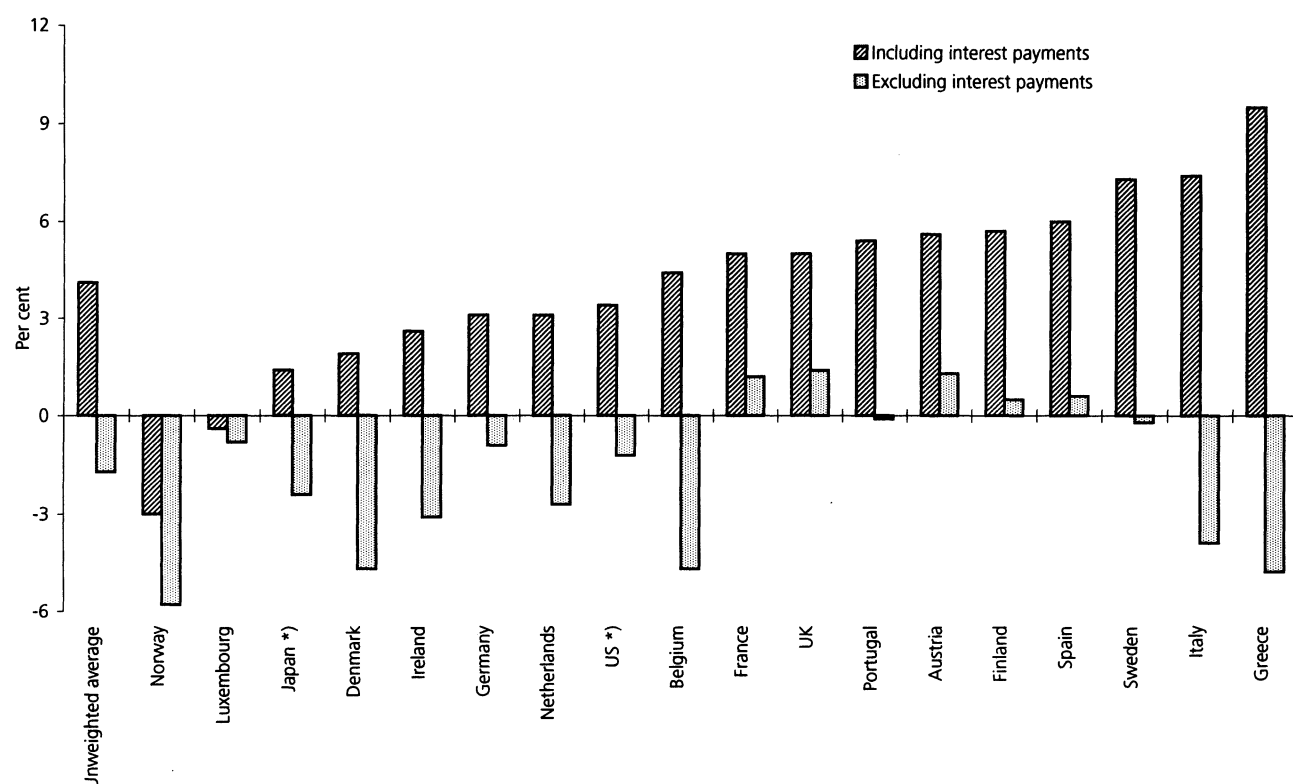
Source: Statistics Norway and EU Commission.

Figure 5. General government interest payments and deficit in per cent of GDP. Norway and EU countries.
Preliminary estimates for 1995



Source: Statistics Norway and EU Commission.

Figure 6. General government deficit including and excluding interest payments, in per cent of GDP. Norway, EU countries, the US and Japan. Preliminary estimates for 1995



*) 1993-figures.

Source: Statistics Norway, EU Commission and OECD.

Formally, the relationship between the budget balance and the debt is given by:

$$\begin{aligned}
 &\text{Net borrowing} \\
 + &\text{Net revaluations and other reconciliation items} \\
 = &\text{Increase in net financial liabilities (gross financial} \\
 &\text{liabilities less gross financial assets)}
 \end{aligned}$$

In other words, any deficit adjusted for reconciliation items can be financed either by reducing financial assets or by increasing debt. In practice, it can still be assumed that, over time, there will be a close correspondence between changes in the budget balance and in gross debt.

Figure 4 shows 1995 figures for Norway and EU countries for gross debt and interest payments in per cent of GDP. There is a clear positive correlation between high gross debt and high interest payments. Greece had the highest interest payments relative to GDP, as much as 14.3 per cent, even though Belgium and Italy had higher debt. The ratio was lowest for Luxembourg, at 0.4 per cent.

Figure 5 shows interest payments and the deficit in per cent of GDP for Norway and EU countries. There may appear to be a tendency for high interest payments to be accompanied by a high deficit. This is an indication that it is difficult to achieve a budget balance when interest payments are high. In 1995, Greece, for example, had both the

highest deficit at 9.3 per cent, and the highest interest payments, at 14.3 per cent of GDP. Adjusted for interest payments, general government in Greece thus had a surplus equivalent to 5 per cent of GDP.

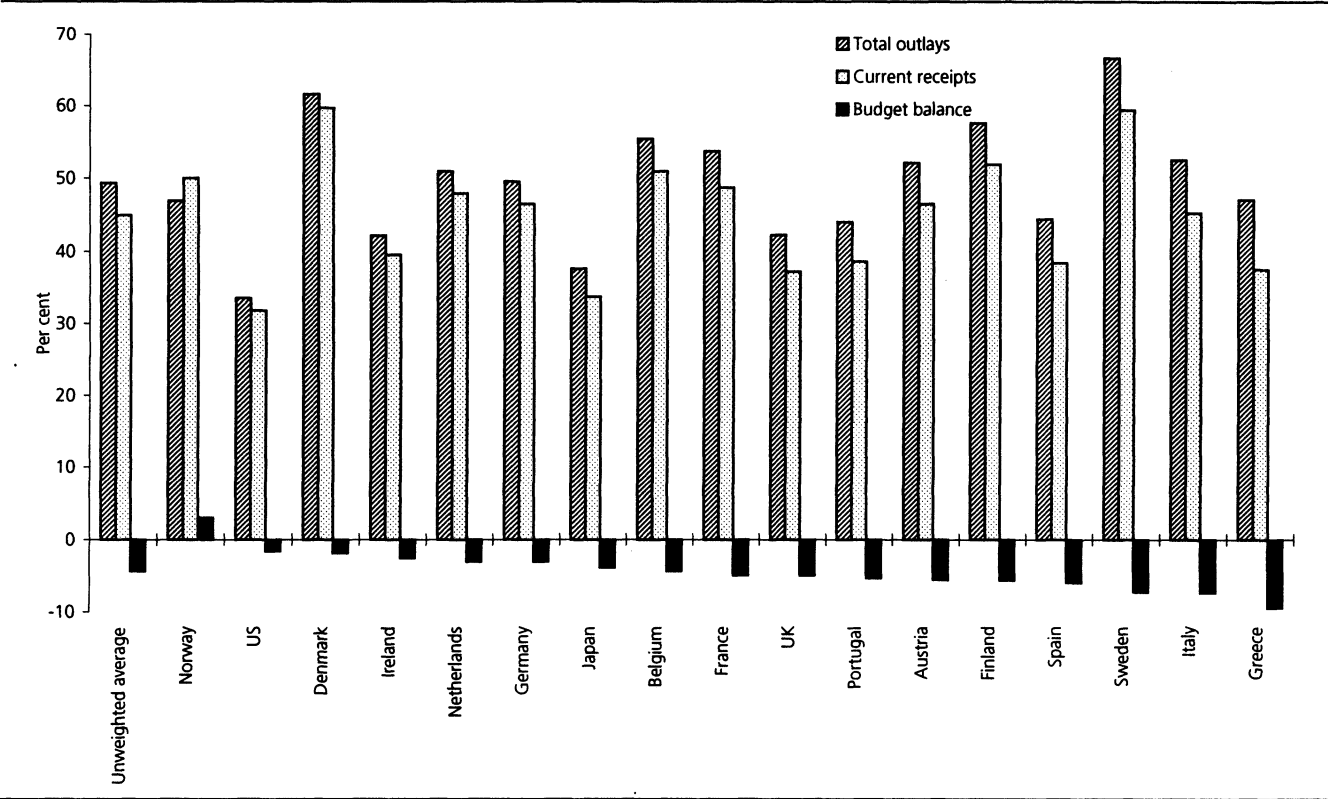
Figure 6 shows figures for Norway, EU countries, the US and Japan grouped according to the size of government deficits in 1995. In addition, the figure shows the deficit adjusted for interest payments, in other words the extent to which general government has a deficit when expenditure to service the debt is excluded. The figure indicates that several of the countries with large deficits actually conduct a tight fiscal policy with a view to reducing the deficit. This applies e.g. to the three countries with the highest debt, notably Belgium, Italy and Greece.

The level of revenues and expenditure

In order to obtain a more complete picture of the budget situation, it may be interesting to see to what extent the differences in the budget balance between countries can be ascribed to differences in the level of revenues or expenditure. Does e.g. Norway have a better budget balance than other countries due to a high level of revenues (e.g. a high tax level) or a low level of expenditure?

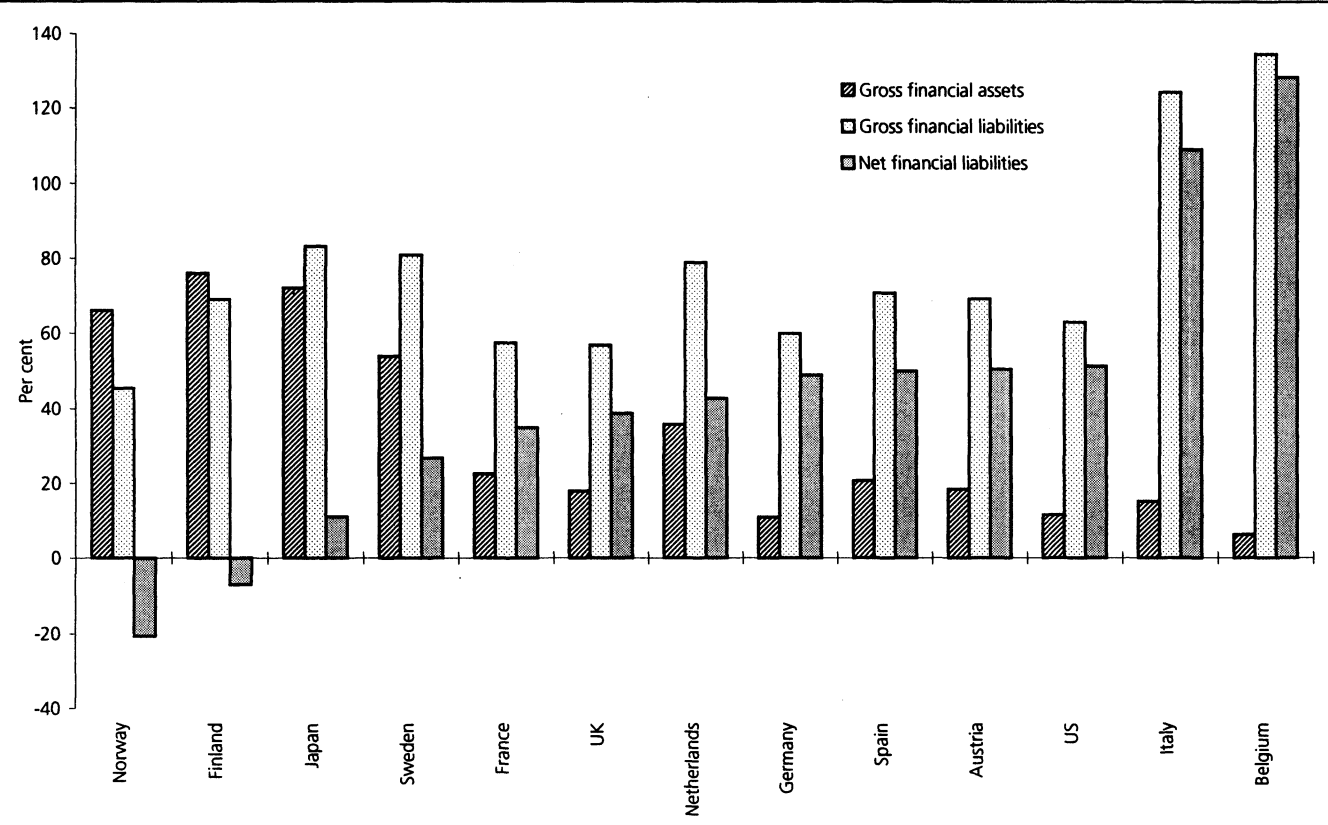
Figure 7 shows the various countries' general government total outlays (expenditure) and current receipts (revenues)

Figure 7. General government total outlays, current receipts and budget balance, in per cent of GDP. Norway, EU countries (excluding Luxembourg), the US and Japan. Preliminary estimates for 1995



Source: Statistics Norway and OECD.

Figure 8. General government gross financial assets and liabilities and net financial liabilities in per cent of GDP. Norway, various EU countries, the US and Japan. Preliminary estimates for 1995



Source: OECD.

as these concepts are defined by the OECD, as well as the budget balance, all measured in per cent of GDP. The countries are grouped according to rising budget deficits towards the right-hand side of the horizontal axis. With the exception of Norway, the figures are the OECD's estimates for 1995 (i.e. not accounts figures), and the estimates for the EU countries' budget balance are thus somewhat different from those used earlier in the article (estimates from the EU Commission).

The figures indicate that Norway is slightly below the average in terms of expenditure level, while the level of revenues is noticeably higher than the average when the figures are compared with an unweighted average. The relatively favourable general government budget balance in Norway is thus related to both a relatively high level of revenues combined with a relatively low level of expenditure (when interest payments are included).

The figure also indicates that there is no clear-cut relationship between the level of revenues and expenditure on the one hand and the budget balance on the other. For example, the two countries with the highest level of both revenues and expenditure are placed at each end of the scale, as Sweden is among those countries with the highest deficit and Denmark among those with the lowest deficit. The two countries with the lowest revenues and expenditure in per cent of GDP, the US and Japan, nevertheless have a relatively small deficit.

Financial assets and liabilities

Gross debt does not provide a complete picture of the financial wealth of general government. A country with a high gross debt in the general government sector, but also substantial gross financial assets can, for example, reduce the gross debt by reducing its gross financial assets. In this way the gross debt can be lowered without it being necessary to introduce tightening measures in the form of spending cuts or higher taxes.

Figure 8 shows general government gross financial assets and gross liabilities (debt) as well as net financial liabilities according to the OECD's preliminary estimates for 1995. It must be noted, however, that poor standardization of the statistics influences the quality of the figures, particularly with regard to financial assets (and thus net financial liabilities).

According to these figures, Norway and Finland were the only countries where general government had net financial assets. For Norway, net financial assets amounted to 21 per cent of GDP. With the exception of Italy and Belgium, where general government net financial liabilities came to more than 100 per cent, net financial liabilities for the other countries were between 11 per cent (Japan) and 51 per cent (US).

Among the countries being studied, we find that there were relatively few which in 1995 had substantial gross fi-

nancial assets measured as a percentage of GDP. This applies to Finland, Japan, Norway, Sweden and the Netherlands. For the other countries, financial assets were at such a low level (between 6 and 23 per cent of GDP) that there are very limited possibilities for reducing debt to any extent by reducing these assets.

Conclusion

Norway is to a large extent in a special position with regard to the general government financial position, measured by the level of net financial assets in per cent of GDP. However, the available international statistics on general government financial assets and liabilities are both deficient and to some extent poorly standardized, among other things with regard to valuation principles and the institutional delineation. It is thus not inconceivable that the shortcomings of the statistics produce a somewhat distorted picture, at least with regard to financial assets. Comparisons of the budget balance over time, however, indicate that the main conclusion still holds.

In the period 1972-1995 the budget balance in Norway was better than in the EU, the US and Japan almost every year. This was also the case in the years before the central government started to derive considerable revenues from petroleum activities (from about 1978). If we deduct the state's net petroleum revenues, however, the budget balance in Norway has been at approximately the same level as in the EU, the US and Japan in the years after 1978.

According to preliminary figures, Norway and Luxembourg were the only countries in 1995 which satisfied both Maastricht criteria for general government finances, i.e. a maximum 3 per cent for the ratio of the government budget deficit to GDP and a maximum 60 per cent for the ratio of gross debt to GDP. Moreover, Norway and Luxembourg were the only two countries to record a budget surplus, and a gross debt of less than 40 per cent of GDP. Five other EU countries along with the US satisfied one of the criteria. For the majority of EU countries (and Japan) it will be very difficult to satisfy both criteria by the turn of the century.

It is also shown that general government revenues in per cent of GDP are appreciably higher in Norway than the other countries on average. The level of expenditure, including interest payments, is slightly lower in Norway. Since 1990, general government financial assets have exceeded liabilities in only Norway and Finland.

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Research publications in English

New titles

Discussion Papers

Elin Berg, Snorre Kverndokk and Knut Einar Rosendahl: Gains from Cartelisation in the Oil Market. DP no. 181, 1996. pp. 32.

In this paper we ask whether OPEC still gains from cartelisation in the oil market despite low producer prices and a modest market share. We apply two intertemporal equilibrium models of the global oil market; one consisting of a cartel and a fringe, and one describing a hypothetical competitive market. Comparing the outcome of these models we conclude that there are positive cartelisation gains of about 18 per cent in the oil market. In comparison with what Pindyck (1978) found for the 1970s this may be considered as quite modest. Moreover, we study whether the cartelisation gains to OPEC are altered by different moves by non-OPEC producers or consumer countries. Generally, we find that the relative cartelisation gains are unchanged. One exception is exploration activities, where we find that a major increase in non-OPEC reserves could remove the cartelisation gains to OPEC completely. In this case, the OPEC-countries could find themselves better off without the cartel.

Rolf Aaberge and Iulie Aslaksen: Decomposition of the Gini Coefficient by Income Components: Various Types of Applications and Interpretations. DP no. 182, 1996. pp. 25.

This paper aims at clarifying the notion "overall distributive effect" of an income component or a policy proposal and moreover discusses various approaches for assessing the distributional impact of the components of total income. We pay particular attention to the problem of evaluating the distributional consequences of including a new income component in the statistical income base. Our example is the value of unpaid household work, which statistically is new to the income base, although conceptually it is included in extended income or full income, so that individual time allocations are already reflected in data. In contrast, introducing a genuinely new income component (e.g. a new transfer payment) will lead to behavioral responses that should be accounted for in the distributional analysis. However, it is

standard practice to ignore behavioral responses in official analyses of tax and benefit reforms (e.g. a new transfer payment) and to compare the Gini coefficients with and without the new income component given unchanged behavior. Rather than solely comparing the levels of the Gini coefficients we suggest that one should compare the decompositions of the Gini coefficients with and without the new income component. This result gives a clarification of the difference between contribution to inequality and (marginal) effect on inequality.

Brita Bye: Taxation, Unemployment and Growth: Dynamic Welfare Effects of "Green" Policies. DP no. 183, 1996. pp. 36.

This paper analyses the effects of so-called "green" tax reforms on a small, open economy producing an imperfect substitute for foreign goods, using an intertemporal general equilibrium model. The labour market is characterized by union wage setting, and a fixed exchange rate implies wage rigidity and involuntary unemployment. The long run effects on instantaneous utility, employment and the stock of real and financial capital of a revenue neutral increase in the tax on fossil fuels combined with a) lump sum rebating or b) change in the labour income tax rate, are discussed. Due to the changes in instantaneous utility during the time path following the implementation of the tax reform, the total welfare effect may be positive even with a reduction in long run consumption. The total welfare effect is in general more positive (or less negative) with wage tax reduction than lump-sum rebating.

Tor Jakob Klette and Frode Johansen: Accumulation of R&D Capital and Dynamic Firm Performance: A Not-so-fixed Effect Model. DP no. 184, 1996. pp. 44.

Considering the observed patterns of R&D investment, we argue that a model which allows for a positive feedback from already acquired knowledge to the productivity of current research, fits the empirical evidence better than the standard model that treats knowledge accumulation symmetrically to the accumulation of physical capital. We present an econome-

tric framework consistent with a positive feedback in the accumulation of R&D capital. The empirical model is econometrically simple and less data-demanding than the standard framework. Our estimates show a significant positive effect of R&D on performance and a positive feedback effect from the stock of knowledge capital. We calculate the depreciation rate and the rate of return to knowledge capital for our alternative framework, and compare our estimated rate of return to results obtained within the standard framework.

Reprints

Børn E. Naug and Ragnar Nymoen: Pricing to Market in a Small Open Economy. Reprints no. 87, 1996. pp. 22.

Reprint from Scandinavian Journal of Economics, vol. 98(3), 1996.

Erling Holmøy and Haakon Vennemo: A General Equilibrium Assessment of a Suggested Reform in Capital Income Taxation. Reprints no. 89, 1996. pp. 26.

Reprint from Journal of Policy Modeling Vol. 17(6), 1995.

Documents

Mette Rolland: Military expenditure in Norway's main partner countries for development assistance. Documents 96/20, 1996. pp. 49.

In recent years military expenditure in developing countries has been the subject of increased attention on the aid policy agenda, both in individual donor countries and in multilateral organizations. This highlights the need for exact information on the allocation of resources to the defence sector in developing countries. Based on the desire to gain insight into existing problems with regard to military expenditure in general and the situation in Norway's main partner countries in particular, a study of military expenditure in developing countries was carried out by the author in the spring of 1994. This study is a follow-up of the empirical section

of the report. It contains a review of the seven most widely used international sources with information concerning the military sector of developing countries. In keeping with the new guidelines for Norwegian development assistance, the country survey has been expanded to include fifteen countries that are part of the high-priority regions. The figures show that military expenditure as a percentage of GDP has risen lately in three of the countries surveyed. For the majority of Norway's main partner countries for development assistance the defense sector is, however, using an increasingly smaller share of the countries' resources.

Petter Jakob Bjerve:

Contributions of Ragnar Frisch to National Accounting.

Documents 96/21, 1996. pp. 19.

The paper demonstrates that Ragnar Frisch already in the late 1920's presented a conceptual system of national accounts similar to that of modern national accounts, and how this system was further developed during the 1930's and 1940's. It also describes an attempt by Frisch to develop numerical national accounts for Norway. Pointing out how these contributions occurred as a part of an international trend, the paper concludes that their impact on official national accounts appears dominating to such a degree that Frisch perhaps, even internationally, deserves the distinction as a major originator of national accounting.

Nils Martin Stølen: **Effects on Wages from Changes in Pay-roll Taxes in Norway.** Documents 96/22, 1996. pp. 14.

Reductions in pay-roll taxes have been proposed as a means to stimulate employment. The effect on wage formation is of great importance when analysing how employment will be affected. The paper presents a survey of this topic based on economic theory and empirical analysis of Norwegian data. Although the effect on wage formation is not precisely determined in any empirical analysis, most of the results indicate that a large part of general changes in pay-roll taxes is shifted over to wages in the long run in Norwegian manufacturing industries. This is in accordance with the Scandinavian theory of inflation and a rather non-elastic supply curve for labour towards manufacturing. The empirical analysis also indicates that wages at the regional level mainly are determined by countrywide factors. A geographical differentiation of pay-roll taxes for the rural areas may thus be beneficial for employment in these areas as wage costs are reduced.

Torstein Bye and Snorre Kverndokk:

Nordic Negotiations on CO₂ Emissions Reduction. The Norwegian Negotiation Team's Considerations. Documents 96/25, 1996. pp. 17.

This document presents the Norwegian team's considerations during a negotiation of tradable CO₂ emissions reduction between Denmark, Finland and Norway. The negotiations were part of a research project headed by Peter Bohm at Stockholm University. The aim of the project was to study the benefits of joint implementations in the Nordic countries compared to traditional unilaterally commitments to reduce CO₂ emissions. When the restrictions through different target levels vary between countries and the marginal cost curves differ, all parties should benefit from trading emissions reductions. Several questions are important to answer like: i) Is the market big enough to create an efficient solution or are there some big country actors that could influence heavily on the solution, ii) which country benefits the most from tradable quotas, and iii) how do negotiators trade to reach a market equilibrium? This paper only addresses the Norwegian team's considerations. The last chapter reports all trade that took place during the negotiation process that lasted for 4 days. The complete report on the project will be discussed by an expert panel and will be released by the co-ordinators in early 1997.

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1*
NATIONAL ACCOUNTS FOR NORWAY

Table A1. Macroeconomic figures. At current prices. Million kroner

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Final consumption exp. of households and NPIS	434 798	457 138	107 668	108 190	116 606	124 675	114 306	113 395	123 157
Goods	234 526	247 613	56 742	59 036	61 574	70 260	60 964	61 778	65 006
Services	198 299	206 763	51 484	48 759	53 559	52 960	53 574	51 058	56 169
Direct purchases abroad by resident househ.	17 713	17 890	2 742	3 864	7 136	4 149	2 982	4 014	7 728
- Direct purchases by non-residents	-15 740	-15 127	-3 300	-3 469	-5 664	-2 694	-3 215	-3 455	-5 746
Final consumption exp. of general government	185 206	191 973	47 015	47 537	48 470	48 951	49 730	50 454	51 130
Final consumption exp. of central government	74 902	76 847	18 837	19 017	19 400	19 594	19 773	20 135	20 227
Central government, defence	53 841	55 915	13 708	13 836	14 114	14 257	14 468	14 750	14 699
Central government, defence	21 061	20 932	5 129	5 181	5 286	5 337	5 305	5 385	5 528
Final consumption exp. of local government	110 304	115 126	28 178	28 520	29 070	29 358	29 957	30 319	30 903
Gross fixed capital formation	183 560	197 664	44 848	48 579	48 061	56 176	46 132	49 747	52 682
Crude petr., gas extr., transp. via pipelines	54 180	48 145	10 407	12 002	12 321	13 414	10 190	12 361	12 286
Ocean transport and oil drilling	4 647	3 703	1 681	1 551	-812	1 284	892	851	1 226
Mainland industries	124 732	145 816	32 759	35 026	36 552	41 478	35 051	36 536	39 171
Manufacturing and mining	10 776	15 632	2 792	3 814	4 185	4 841	3 407	4 052	4 511
Production of other goods	11 404	12 179	2 319	3 380	3 203	3 278	2 377	3 262	3 184
General government	28 276	29 164	6 129	6 342	7 384	9 309	6 626	6 745	7 873
Dwelling service	24 271	28 735	6 993	6 966	7 140	7 635	6 843	6 832	7 406
Other services	50 005	60 106	14 527	14 524	14 640	16 416	15 798	15 645	16 197
Changes in inventories	13 445	23 401	8 963	6 372	4 702	3 364	9 919	5 163	2 726
Gross capital formation	197 005	221 065	53 810	54 952	52 764	59 540	56 051	54 910	55 408
Final domestic use of goods and services	817 009	870 177	208 493	210 678	217 839	233 166	220 086	218 759	229 694
Demand from Mainland-Norway	744 737	794 927	187 442	190 753	201 627	215 104	199 086	200 385	213 457
Exports	334 837	355 041	89 294	86 302	88 500	90 945	98 562	98 300	101 554
Traditional goods	128 522	143 413	38 118	33 838	34 730	36 727	40 395	37 384	36 800
Crude oil and natural gas	106 440	113 231	28 000	28 003	26 353	30 875	34 589	36 962	38 903
Ships and platforms	10 597	10 581	1 966	3 024	3 525	2 066	1 899	1 724	922
Services	89 278	87 816	21 210	21 437	23 892	21 277	21 679	22 230	24 929
Total use of goods and services	1 151 846	1 225 218	297 787	296 980	306 339	324 111	318 648	317 059	331 248
Imports	282 104	299 352	71 130	73 395	75 114	79 713	75 051	74 771	78 439
Traditional goods	184 692	202 854	49 236	49 878	49 300	54 440	53 150	52 313	52 636
Crude oil	867	1 121	326	356	270	169	218	255	169
Ships and platforms	12 355	12 866	3 059	2 415	2 413	4 979	3 129	2 217	1 966
Services	84 190	82 511	18 509	20 746	23 131	20 125	18 554	19 986	23 668
Gross domestic product	869 742	925 866	226 657	223 585	231 225	244 398	243 597	242 288	252 809
Mainland-Norway	741 287	793 220	194 285	190 291	199 786	208 858	203 961	200 008	208 404
Oil activities and ocean transport	128 455	132 646	32 372	33 294	31 439	35 540	39 637	42 280	44 405
Mainland industries	656 157	696 538	172 444	166 804	175 164	182 126	179 088	175 584	181 843
Manufacturing and mining	104 041	118 140	30 059	29 646	28 137	30 298	31 139	30 415	28 637
Production of other goods	71 254	79 865	20 212	16 400	21 477	21 776	21 458	16 259	21 124
General government	138 436	144 418	35 358	35 771	36 467	36 822	37 670	38 181	39 023
Private services	342 427	354 115	86 814	84 988	89 082	93 230	88 821	90 730	93 059
Correction items	85 129	96 682	21 841	23 487	24 622	26 732	24 873	24 424	26 561

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Table A2. Macroeconomic figures. At constant 1993-prices. Million kroner

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Final consumption exp. of households and NPIS	428 584	439 735	103 503	104 723	112 474	119 034	109 288	108 299	116 886
Goods	230 865	237 868	54 706	56 539	59 076	67 547	58 973	59 159	61 878
Services	196 045	199 269	49 337	47 704	52 080	50 148	50 601	48 638	53 384
Direct purchases abroad by resident househ. .	17 286	17 298	2 676	3 827	6 880	3 915	2 801	3 773	7 174
- Direct purchases by non-residents	-15 613	-14 700	-3 215	-3 348	-5 562	-2 575	-3 086	-3 271	-5 550
Final consumption exp. of general government .	180 868	181 182	44 626	45 045	45 653	45 858	46 029	46 394	46 432
Final consumption exp. of central government.	73 232	72 744	18 061	18 131	18 283	18 268	18 487	18 622	18 456
Central government, defence	52 850	53 001	13 135	13 221	13 331	13 314	13 522	13 678	13 434
Central government, defence	20 382	19 743	4 926	4 910	4 952	4 954	4 965	4 944	5 021
Final consumption exp. of local government .	107 636	108 438	26 565	26 914	27 369	27 590	27 542	27 772	27 977
Gross fixed capital formation	179 759	187 837	43 184	46 221	45 487	52 945	43 076	46 242	48 899
Crude petr., gas extr., transp. via pipelines . .	52 972	46 014	10 054	11 495	11 700	12 766	9 595	11 486	11 475
Ocean transport and oil drilling	4 826	3 373	1 681	1 595	-1 067	1 164	812	816	1 169
Mainland industries	121 961	138 449	31 449	33 131	34 854	39 015	32 668	33 941	36 255
Manufacturing and mining	10 698	15 158	2 758	3 700	4 067	4 633	3 254	3 901	4 303
Production of other goods	11 250	11 731	2 262	3 251	3 086	3 132	2 262	3 107	2 991
General government	27 706	27 562	5 873	5 991	6 970	8 729	6 141	6 210	7 143
Dwelling service	23 526	26 510	6 565	6 407	6 565	6 972	6 163	6 019	6 513
Other services	48 781	57 488	13 992	13 782	14 166	15 549	14 848	14 704	15 305
Changes in inventories	13 506	23 997	9 041	6 292	5 283	3 381	9 597	4 840	3 680
Gross capital formation	193 266	211 834	52 225	52 513	50 770	56 326	52 673	51 082	52 578
Final domestic use of goods and services . . .	802 717	832 751	200 355	202 281	208 897	221 218	207 990	205 775	215 896
Demand from Mainland-Norway	731 413	759 366	179 579	182 899	192 981	203 907	187 986	188 634	199 573
Exports	341 828	354 689	88 149	85 221	89 704	91 615	96 128	93 522	96 551
Traditional goods	127 108	132 372	34 644	31 328	32 057	34 343	37 837	34 962	34 874
Crude oil and natural gas	116 112	125 818	30 700	29 844	30 493	34 781	35 543	35 435	36 441
Ships and platforms	10 416	10 954	2 043	3 037	3 731	2 143	1 936	1 683	895
Services	88 191	85 544	20 762	21 011	23 422	20 348	20 811	21 441	24 340
Total use of goods and services	1 144 545	1 187 439	288 504	287 502	298 601	312 833	304 118	299 296	312 447
Imports	279 766	294 127	69 593	72 896	73 877	77 761	72 794	72 987	76 313
Traditional goods	184 085	200 845	48 661	49 561	49 049	53 574	52 334	52 029	52 256
Crude oil	943	1 244	349	382	328	185	214	219	140
Ships and platforms	12 446	13 250	3 198	2 566	2 425	5 061	3 085	2 162	1 962
Services	82 292	78 787	17 385	20 387	22 075	18 940	17 161	18 578	21 955
Gross domestic product	864 780	893 312	218 911	214 606	224 723	235 072	231 325	226 309	236 134
Mainland-Norway	725 221	745 023	182 728	179 215	188 319	194 760	190 061	185 169	193 684
Oil activities and ocean transport	139 559	148 290	36 183	35 391	36 404	40 312	41 264	41 141	42 450
Mainland industries	651 036	666 373	164 405	160 415	168 421	173 133	169 947	165 063	172 570
Manufacturing and mining	101 380	104 322	27 099	26 272	24 197	26 754	27 806	26 352	25 307
Production of other goods	69 487	75 588	18 759	15 047	20 906	20 876	19 565	14 546	19 872
General government	134 578	135 321	33 358	33 552	34 066	34 345	34 573	34 701	35 005
Private services	345 591	351 141	85 189	85 544	89 251	91 157	88 002	89 465	92 385
Correction items	74 185	78 649	18 323	18 801	19 899	21 627	20 114	20 106	21 114

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Table A3. Macroeconomic figures.
Percentage change in volume from preceding year

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Final consumption exp. of households and NPIS	4,1	2,6	1,1	2,9	3,8	2,6	5,6	3,4	3,9
Goods	5,1	3,0	1,7	4,0	4,1	2,4	7,8	4,6	4,7
Services	3,3	1,6	1,1	0,9	1,5	3,1	2,6	2,0	2,5
Direct purchases abroad by resident househ.	8,6	0,1	-8,3	-0,3	3,8	0,3	4,7	-1,4	4,3
- Direct purchases by non-residents	13,5	-5,8	3,2	-10,2	-11,9	4,8	-4,0	-2,3	-0,2
Final consumption exp. of general government	0,7	0,2	-0,4	0,1	0,4	0,6	3,1	3,0	1,7
Final consumption exp. of central government	-1,2	-0,7	-0,4	-0,6	-0,8	-0,9	2,4	2,7	0,9
Central government, defence	-0,1	0,3	0,5	0,3	0,2	0,1	2,9	3,5	0,8
Central government, defence	-3,9	-3,1	-2,8	-2,8	-3,5	-3,5	0,8	0,7	1,4
Final consumption exp. of local government	2,0	0,7	-0,4	0,6	1,2	1,6	3,7	3,2	2,2
Gross fixed capital formation	6,9	4,5	7,1	0,3	-0,3	10,9	-0,3	0,0	7,5
Crude petr., gas extr., transp. via pipelines	-7,3	-13,1	-17,7	-30,7	-9,7	14,0	-4,6	-0,1	-1,9
Ocean transport and oil drilling	-30,5	-30,1	-31,9	2,5	-197,1		-51,7	-48,9	
Mainland industries	17,2	13,5	22,6	18,7	10,4	5,9	3,9	2,4	4,0
Manufacturing and mining	8,3	41,7	45,6	59,8	38,8	30,2	18,0	5,4	5,8
Production of other goods	2,5	4,3	13,1	0,4	2,4	4,5	0,0	-4,4	-3,1
General government	1,6	-0,5	3,1	3,0	5,0	-8,7	4,6	3,7	2,5
Dwelling service	34,9	12,7	31,6	19,4	6,1	-0,1	-6,1	-6,1	-0,8
Other services	26,6	17,8	26,3	23,3	10,8	13,2	6,1	6,7	8,0
Changes in inventories	40,2	77,7	29,8	74,7	161,0	269,6	6,1	-23,1	-30,3
Gross capital formation	8,7	9,6	10,4	5,7	6,6	15,8	0,9	-2,7	3,6
Final domestic use of goods and services	4,4	3,7	3,0	3,0	3,7	5,2	3,8	1,7	3,4
Demand from Mainland-Norway	5,2	3,8	3,9	4,7	4,1	2,7	4,7	3,1	3,4
Exports	8,2	3,8	6,8	2,0	5,8	0,8	9,1	9,7	7,6
Traditional goods	13,1	4,1	15,1	1,1	2,1	-0,8	9,2	11,6	8,8
Crude oil and natural gas	11,6	8,4	4,6	4,4	14,8	10,0	15,8	18,7	19,5
Ships and platforms	-12,0	5,2	0,4	68,2	55,6	-48,7	-5,3	-44,6	-76,0
Services	0,6	-3,0	-1,5	-5,3	-4,3	-0,6	0,2	2,0	3,9
Total use of goods and services	5,5	3,7	4,1	2,7	4,3	3,9	5,4	4,1	4,6
Imports	6,9	5,1	4,9	3,6	4,1	7,8	4,6	0,1	3,3
Traditional goods	15,3	9,1	12,4	9,5	7,0	7,8	7,5	5,0	6,5
Crude oil	-17,5	32,0	48,5	66,9	30,8	-18,9	-38,7	-42,8	-57,3
Ships and platforms	-33,9	6,5	-28,2	-31,5	28,0	115,3	-3,5	-15,8	-19,1
Services	0,4	-4,3	-5,1	-3,5	-4,0	-4,6	-1,3	-8,9	-0,5
Gross domestic product	5,0	3,3	3,9	2,4	4,3	2,6	5,7	5,5	5,1
Mainland-Norway	4,3	2,7	3,8	2,3	3,2	1,7	4,0	3,3	2,8
Oil activities and ocean transport	8,8	6,3	4,4	2,6	11,0	7,1	14,0	16,2	16,6
Mainland industries	4,0	2,4	3,4	1,8	2,7	1,5	3,4	2,9	2,5
Manufacturing and mining	5,4	2,9	9,3	1,2	1,3	-0,0	2,6	0,3	4,6
Production of other goods	0,8	8,8	10,1	10,4	6,7	8,6	4,3	-3,3	-4,9
General government	1,1	0,6	-0,5	0,4	0,9	1,3	3,6	3,4	2,8
Private services	5,4	1,6	1,8	1,1	2,9	0,6	3,3	4,6	3,5
Correction items	7,5	6,0	7,7	6,7	6,7	3,4	9,8	6,9	6,1

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Table A4. Macroeconomic figures.

Percentage change in prices from preceding year

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Final consumption exp. of households and NPIS	1,5	2,5	2,9	2,3	2,2	2,5	0,5	1,4	1,6
Goods	1,6	2,5	3,1	3,0	2,0	1,9	-0,3	0,0	0,8
Services	1,1	2,6	2,6	1,8	2,4	3,4	1,5	2,7	2,3
Direct purchases abroad by resident househ. .	2,5	0,9	-0,0	-0,9	1,4	2,6	3,9	5,4	3,9
- Direct purchases by non-residents	0,8	2,1	1,6	2,2	2,1	2,1	1,5	1,9	1,7
Final consumption exp. of general government .	2,4	3,5	4,0	3,5	3,2	3,1	2,6	3,1	3,7
Final consumption exp. of central government.	2,3	3,3	3,0	3,1	3,4	3,7	2,6	3,1	3,3
Central government, defence	1,9	3,6	3,3	3,4	3,6	4,0	2,5	3,0	3,3
Central government, defence	3,3	2,6	2,3	2,2	2,9	3,0	2,6	3,2	3,1
Final consumption exp. of local government .	2,5	3,6	4,7	3,8	3,1	2,8	2,5	3,0	4,0
Gross fixed capital formation	2,1	3,1	2,5	2,8	3,6	3,2	3,1	2,4	2,0
Crude petr., gas extr., transp. via pipelines .	2,3	2,3	2,1	2,7	2,5	1,4	2,6	3,1	1,7
Ocean transport and oil drilling	-3,7	14,0	3,9	-0,4	-24,2	-6,8	9,9	7,3	37,7
Mainland industries	2,3	3,0	2,4	2,8	3,1	3,5	3,0	1,8	3,0
Manufacturing and mining	0,7	2,4	0,4	2,1	3,0	3,3	3,4	0,8	1,9
Production of other goods	1,4	2,4	1,2	2,5	2,7	3,0	2,5	1,0	2,6
General government	2,1	3,7	3,1	3,4	4,2	4,0	3,4	2,6	4,0
Dwelling service	3,2	5,1	5,0	6,3	4,7	4,9	4,2	4,4	4,6
Other services	2,5	2,0	1,4	1,1	2,1	3,0	2,5	1,0	2,4
Changes in inventories.	-0,5	-2,0	-2,9	-1,3	-7,5	32,9	4,3	5,3	-16,8
Gross capital formation	1,9	2,4	1,6	2,3	2,2	3,4	3,3	2,7	1,4
Final domestic use of goods and services . . .	1,8	2,7	2,8	2,6	2,4	2,9	1,7	2,1	2,0
Demand from Mainland-Norway	1,8	2,8	3,1	2,7	2,6	2,9	1,5	1,9	2,4
Exports.	-2,0	2,2	6,0	3,2	-0,4	0,4	1,2	3,8	6,6
Traditional goods	1,1	7,1	11,0	8,2	6,0	3,8	-3,0	-1,0	-2,6
Crude oil and natural gas	-8,3	-1,8	4,4	-1,1	-7,3	-3,0	6,7	11,2	23,5
Ships and platforms.	1,7	-5,1	-4,4	-0,6	-6,8	-6,5	1,9	2,9	9,0
Services	1,2	1,4	0,5	2,0	1,0	2,1	2,0	1,6	0,4
Total use of goods and services	0,6	2,5	3,7	2,8	1,6	2,2	1,5	2,6	3,3
Imports.	0,8	0,9	1,0	0,9	0,9	0,8	0,9	1,7	1,1
Traditional goods	0,3	0,7	0,7	1,2	0,4	0,4	0,4	-0,1	0,2
Crude oil	-8,1	-2,0	-0,7	3,0	-11,0	0,7	9,2	25,3	46,5
Ships and platforms.	-0,7	-2,2	-2,5	-5,1	-0,7	-2,6	6,0	9,0	0,7
Services	2,3	2,4	2,7	1,0	2,7	3,1	1,6	5,7	2,9
Gross domestic product	0,6	3,1	4,5	3,4	1,8	2,6	1,7	2,8	4,1
Mainland-Norway.	2,2	4,2	4,9	4,2	3,6	3,9	0,9	1,7	1,4
Oil activities and ocean transport	-8,0	-2,8	2,5	-1,2	-8,2	-3,9	7,4	9,2	21,1
Mainland industries.	0,8	3,7	4,7	3,2	3,3	3,6	0,5	2,3	1,3
Manufacturing and mining	2,6	10,3	9,0	10,1	12,2	10,4	1,0	2,3	-2,7
Production of other goods	2,5	3,0	7,9	5,8	-0,1	-0,0	1,8	2,6	3,5
General government	2,9	3,7	4,8	3,8	3,4	3,1	2,8	3,2	4,1
Private services	-0,9	1,8	2,6	0,3	1,6	2,6	-1,0	2,1	0,9
Correction items	14,8	7,1	5,8	11,6	5,4	6,1	3,7	-2,8	1,7

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Table A5. Gross domestic product by kind of activity. At current prices. Million kroner

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Gross domestic product	869 742	925 866	226 657	223 585	231 225	244 398	243 597	242 288	252 809
Agriculture	12 695	12 077	2 567	182	6 114	3 214	2 515	111	6 040
Forestry and logging	2 646	3 507	1 432	953	290	832	1 307	859	334
Fishing and fish farms	6 859	6 445	1 978	1 602	1 574	1 290	1 919	1 279	1 265
Oil activities	99 028	102 660	25 059	25 817	23 938	27 846	31 731	34 432	36 615
Crude petroleum and natural gas extraction . .	96 283	100 494	24 484	25 400	23 438	27 172	31 129	33 756	35 719
Service activities incidental to oil and gas . . .	2 745	2 167	575	417	500	674	601	676	897
Mining and quarrying	1 533	1 532	374	407	374	377	388	405	347
Manufacturing	102 508	116 608	29 686	29 239	27 763	29 921	30 751	30 009	28 290
Food products, beverages and tobacco	16 793	17 374	4 078	4 471	4 250	4 576	4 401	4 898	4 348
Textiles, wearing apparel and leather products . .	2 369	2 379	691	618	493	576	616	592	559
Paper and paper products	4 554	7 744	1 671	1 800	2 074	2 200	1 699	1 315	1 256
Printing and publishing	11 595	12 004	3 081	2 943	2 817	3 163	3 489	3 376	3 259
Petroleum refining	2 151	2 054	364	415	612	663	467	610	441
Basic chemicals	5 306	6 851	1 838	1 820	1 748	1 445	1 688	1 594	1 595
Chemical and mineral products	9 124	10 383	2 663	2 583	2 372	2 765	2 861	2 800	2 500
Metal products	8 924	12 492	3 303	3 133	3 068	2 988	3 169	3 071	2 558
Machinery, ships and other transport equipm. .	33 664	37 194	9 792	9 469	8 567	9 366	10 348	9 869	9 957
Wood products, furniture and other manuf. . . .	8 028	8 133	2 203	1 987	1 763	2 180	2 014	1 885	1 818
Electricity, gas and water supply	20 449	23 938	6 806	5 233	4 905	6 995	7 303	4 580	3 706
Construction	28 605	33 897	7 430	8 428	8 594	9 445	8 413	9 430	9 780
Wholesale and retail trade	83 487	88 735	20 914	21 473	21 957	24 391	21 567	22 663	22 712
Hotels and restaurants	11 700	11 684	2 484	2 746	3 074	3 379	2 550	2 882	3 143
Transport via pipelines	12 590	13 463	3 253	3 190	3 231	3 789	3 859	3 808	3 855
Other transport and communication	54 415	58 266	13 287	14 521	15 348	15 110	14 027	15 766	16 345
Inland water and coastal transport	18 881	18 528	4 500	4 802	4 822	4 404	4 468	4 554	4 432
Ocean transport	16 837	16 523	4 060	4 288	4 270	3 906	4 047	4 040	3 935
Inland water and coastal transport	2 044	2 005	440	514	552	498	420	514	497
Financial intermediation and insurance	38 622	36 718	10 858	7 366	7 972	10 521	9 382	8 479	7 996
Dwelling service	62 277	63 398	15 672	15 782	15 908	16 037	16 136	16 292	16 390
Business activities	46 239	47 867	11 533	11 786	12 216	12 331	12 444	12 878	13 364
Private services	43 643	45 442	11 626	10 799	12 054	10 963	12 296	11 256	12 613
General government	138 436	144 418	35 358	35 771	36 467	36 822	37 670	38 181	39 023
Central government	41 162	42 184	10 337	10 442	10 653	10 752	10 879	11 060	11 384
Civilian	30 382	31 441	7 705	7 783	7 940	8 013	8 202	8 356	8 625
Defence	10 780	10 743	2 632	2 659	2 713	2 739	2 677	2 704	2 759
Local government	97 274	102 234	25 021	25 329	25 814	26 070	26 791	27 121	27 639
FISIM 1)	-31 162	-29 590	-7 543	-7 397	-7 088	-7 561	-7 191	-7 389	-7 301
Value added tax and investment levy	80 775	89 080	20 759	21 478	22 291	24 552	22 375	22 418	23 737
Other taxes on products, net	34 147	36 010	8 333	9 284	8 886	9 507	9 422	9 364	9 885
Statistical discrepancy	1 370	1 182	293	122	533	234	266	32	239
Mainland industries	656 157	696 538	172 444	166 804	175 164	182 126	179 088	175 584	181 843
Market producers	570 625	607 551	150 463	145 195	150 558	161 335	161 492	159 997	167 057
Non-market producers	213 988	221 633	54 353	54 904	56 044	56 332	57 232	57 867	59 191

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Table A6. Gross domestic product by kind of activity.
Percentage change in volume from preceding year

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Gross domestic product	5,0	3,3	3,9	2,4	4,3	2,6	5,7	5,5	5,1
Agriculture	-4,8	7,9	2,5	-8,5	12,3	6,9	5,1	25,5	1,5
Forestry and logging	1,5	6,1	30,8	-5,8	-6,8	-5,5	-22,0	-21,9	0,2
Fishing and fish farms	12,7	7,7	4,9	11,6	4,9	9,8	15,1	5,8	2,0
Oil activities	11,8	6,9	4,1	2,4	13,7	7,6	16,6	17,1	18,1
Crude petroleum and natural gas extraction . .	12,0	7,2	4,8	3,0	14,1	7,3	17,0	16,8	17,4
Service activities incidental to oil and gas . . .	2,3	-6,3	-19,5	-23,5	-1,6	22,0	-0,7	36,6	55,0
Mining and quarrying	5,6	2,6	11,2	4,1	-2,4	-0,8	6,3	-0,9	-2,6
Manufacturing	5,4	2,9	9,3	1,2	1,4	0,0	2,6	0,3	4,7
Food products, beverages and tobacco	4,4	1,7	5,6	1,2	-0,6	0,9	4,7	0,7	1,3
Textiles, wearing apparel and leather products .	9,3	-3,7	13,6	-3,4	-6,6	-16,8	-10,9	-4,3	9,9
Paper and paper products	9,4	4,6	9,5	7,1	3,8	-1,7	-5,1	-10,4	-6,7
Printing and publishing	2,1	3,4	4,4	1,5	3,1	4,4	4,1	4,8	3,9
Petroleum refining	3,3	-9,4	-3,6	-8,1	-7,6	-17,9	0,4	1,8	17,7
Basic chemicals	3,0	0,0	5,9	0,8	-3,0	-3,8	-1,6	-9,5	5,4
Chemical and mineral products	8,4	6,7	15,6	1,5	6,2	4,2	3,3	3,6	3,2
Metal products	8,9	-2,3	5,2	-4,4	-5,0	-4,8	1,6	3,7	3,3
Machinery, ships and other transport equipm. .	5,0	5,1	12,0	2,8	4,5	1,5	4,0	-0,4	7,9
Wood products, furniture and other manuf. . . .	6,8	1,6	12,5	-0,6	-2,4	-2,5	0,7	2,9	5,2
Electricity, gas and water supply	-5,6	8,7	1,9	8,3	8,4	16,6	7,9	-14,0	-29,8
Construction	6,2	9,8	20,7	15,5	2,0	4,6	2,3	1,7	2,5
Wholesale and retail trade	7,8	4,0	7,5	3,5	4,2	1,2	7,3	6,2	5,1
Hotels and restaurants	11,6	-0,5	-4,4	-1,3	1,2	1,8	1,3	1,2	1,6
Transport via pipelines	12,0	8,6	6,8	3,5	15,7	8,8	16,8	17,7	16,7
Other transport and communication	10,3	7,1	9,0	6,8	5,7	7,1	3,6	6,9	6,2
Inland water and coastal transport	-7,0	0,4	3,9	2,7	-5,7	1,2	-3,3	9,1	6,3
Ocean transport	-8,7	0,8	4,8	3,6	-6,3	1,7	-3,4	9,5	7,0
Inland water and coastal transport	9,5	-3,1	-4,4	-4,4	-1,3	-2,6	-2,6	5,5	1,0
Financial intermediation and insurance	6,6	-5,8	-4,9	-6,6	-7,6	-4,1	-1,2	7,0	0,2
Dwelling service	1,0	1,0	0,9	1,0	1,1	1,1	1,2	1,3	1,4
Business activities	4,6	0,2	-5,1	-0,9	14,3	-5,4	4,0	5,2	6,0
Private services	-0,6	-0,1	-0,2	-0,6	0,1	0,2	2,2	0,8	0,7
General government	1,1	0,6	-0,5	0,4	0,9	1,3	3,6	3,4	2,8
Central government	-0,7	-0,8	-0,8	-0,6	-0,9	-0,8	2,5	2,7	3,0
Civilian	1,3	-0,1	-0,0	-0,1	-0,1	-0,0	3,6	4,2	4,5
Defence	-6,1	-2,9	-3,1	-2,1	-3,3	-3,0	-0,8	-2,0	-1,3
Local government	1,9	1,1	-0,3	0,9	1,7	2,2	4,1	3,7	2,6
FISIM 1)	4,7	1,0	0,7	-0,0	1,4	2,1	-0,5	-0,4	1,7
Value added tax and investment levy	6,3	4,5	5,2	5,2	4,7	3,1	5,3	3,3	3,7
Other taxes on products, net	7,5	4,1	5,8	2,7	5,8	2,4	9,5	8,2	7,6
Statistical discrepancy	.	.	208,4	231,2	-362,0	-446,2	36,2	14,3	10,5
Mainland industries	4,0	2,4	3,4	1,8	2,7	1,5	3,4	2,9	2,5
Market producers	6,3	3,9	4,9	2,5	5,3	3,0	6,2	6,3	6,0
Non-market producers	1,0	0,7	0,0	0,6	0,9	1,1	2,8	2,5	2,1

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Table A7. Final consumption expenditure of households. At current prices. Million kroner

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Final consumption expenditure of households .	412 881	434 687	102 119	102 621	110 961	118 987	108 454	107 584	117 240
Food, beverages and tobacco.	88 324	93 728	20 862	23 556	24 303	25 007	21 746	23 959	24 902
Clothing and footwear	26 787	25 969	5 474	6 243	6 136	8 116	5 550	6 309	6 352
Housing, water, electr., gas and other fuels . . .	96 935	101 326	26 360	24 238	23 695	27 033	27 688	25 103	24 790
Furnishings, household equipment etc.	26 567	28 113	6 157	5 978	6 987	8 991	6 565	6 031	7 105
Health	10 153	10 736	2 555	2 659	2 684	2 837	2 751	2 825	2 862
Transport	64 094	68 910	15 846	17 504	18 735	16 825	18 070	19 697	21 175
Leisure, entertainment and culture	38 107	40 802	10 007	8 377	11 353	11 065	10 648	8 800	11 721
Education	1 992	2 061	488	432	560	580	505	454	573
Hotels, cafes and restaurants	23 173	23 325	4 854	5 376	6 739	6 357	4 998	5 543	6 974
Miscellaneous goods and services	34 777	36 952	10 072	7 862	8 297	10 721	10 165	8 304	8 806
Direct purchases abroad by resident househ. . .	17 713	17 890	2 742	3 864	7 136	4 149	2 982	4 014	7 728
- Direct purchases by non-residents	-15 740	-15 127	-3 300	-3 469	-5 664	-2 694	-3 215	-3 455	-5 746
Goods	234 526	247 613	56 742	59 036	61 574	70 260	60 964	61 778	65 006
Services	176 382	184 311	45 935	43 190	47 915	47 272	47 723	45 247	50 252
Services, dwellings	79 263	81 892	20 240	20 256	20 497	20 898	20 911	21 030	21 234
Other services	97 119	102 420	25 695	22 934	27 417	26 374	26 811	24 216	29 018

Table A8. Final consumption expenditure of households.
Percentage change in volume from preceding year

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Final consumption expenditure of households .	4,4	2,8	1,2	3,1	4,0	2,8	5,7	3,5	4,1
Food, beverages and tobacco.	3,1	3,8	0,8	5,2	5,6	3,4	3,5	0,5	-0,2
Clothing and footwear	1,8	-3,8	-1,0	-2,9	-3,9	-6,1	5,9	5,2	7,1
Housing, water, electr., gas and other fuels . . .	1,6	1,8	-0,5	1,9	1,6	4,2	4,0	1,4	1,8
Furnishings, household equipment etc.	9,4	5,1	4,5	5,5	6,7	4,0	5,6	-0,1	0,7
Health	0,3	-0,6	0,5	-1,2	-1,6	-0,1	1,5	2,2	3,4
Transport	9,9	3,7	7,2	2,4	3,0	2,5	13,4	11,9	13,4
Leisure, entertainment and culture	6,4	5,5	5,7	5,7	5,2	5,4	6,0	5,3	2,6
Education	-0,0	0,4	3,3	0,5	-1,2	-0,5	-1,4	0,2	-2,0
Hotels, cafes and restaurants	8,4	-0,7	-5,9	-1,5	1,3	2,1	1,2	0,7	1,4
Miscellaneous goods and services	3,6	2,8	0,4	3,1	3,2	4,5	3,6	3,0	4,7
Direct purchases abroad by resident househ. . .	8,6	0,1	-8,3	-0,3	3,8	0,3	4,7	-1,4	4,3
- Direct purchases by non-residents	13,5	-5,8	3,2	-10,2	-11,9	4,8	-4,0	-2,3	-0,2
Goods	5,1	3,0	1,7	4,0	4,1	2,4	7,8	4,6	4,7
Services	3,9	2,0	1,4	1,1	1,8	3,7	2,5	2,1	2,7
Services, dwellings	1,8	1,4	1,7	0,9	1,0	2,0	1,4	1,4	1,5
Other services	5,8	2,5	1,2	1,3	2,4	5,1	3,5	2,6	3,6

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Table A9. Gross fixed capital formation by type of capital goods and economic activity.
At current prices. Million kroner

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Gross fixed capital formation	183 560	197 664	44 848	48 579	48 061	56 176	46 132	49 747	52 682
Buildings and structures	69 516	83 391	18 618	20 179	20 944	23 649	19 169	19 679	21 344
Oil exploration, drilling, pipelines for oil	21 448	17 938	3 553	4 473	5 346	4 565	4 119	4 921	5 851
Oil platforms etc.	26 292	25 911	5 811	6 500	5 894	7 707	5 291	6 446	6 269
Ships and boats.	6 753	4 929	1 982	1 784	-453	1 616	1 212	1 129	1 356
Other transport equipment.	17 017	17 432	4 511	4 321	4 139	4 461	5 354	5 636	5 095
Machinery and equipment	42 532	48 063	10 373	11 322	12 191	14 178	10 988	11 937	12 766
Agriculture	4 790	5 315	921	1 599	1 493	1 302	962	1 686	1 574
Forestry and logging	511	531	132	133	131	134	136	137	136
Fishing and fish farms	823	671	217	183	118	154	256	104	122
Oil activities	44 856	41 719	9 646	10 458	9 808	11 807	8 968	10 624	10 408
Crude petroleum and natural gas extraction.	45 571	42 059	9 641	10 453	10 022	11 942	8 966	10 775	10 408
Service activities incidental to oil and gas	-715	-340	4	5	-215	-135	2	-151	-
Mining and quarrying	247	442	100	102	101	138	72	54	108
Manufacturing	10 529	15 190	2 691	3 711	4 084	4 703	3 335	3 998	4 402
Food products, beverages and tobacco	2 607	3 008	552	821	728	906	574	673	758
Textiles, wearing apparel and leather product.	183	176	53	44	33	47	39	40	55
Paper and paper products	549	1 616	206	400	583	427	382	312	243
Printing and publishing	954	817	182	151	157	326	201	223	218
Petroleum refining	198	300	73	102	46	78	57	16	35
Basic chemicals.	1 097	3 073	439	869	913	852	594	556	600
Chemical and mineral products	924	1 159	229	266	325	338	286	332	374
Metal products	987	1 478	297	283	355	544	422	770	842
Machinery, ships and other transport equipm.	2 079	2 361	463	499	644	756	517	649	671
Wood products, furniture and other manuf.	951	1 201	197	277	299	428	263	426	606
Electricity, gas and water supply	4 355	4 527	776	1 174	1 195	1 382	742	1 020	1 066
Construction	925	1 136	273	290	266	306	282	316	286
Wholesale and retail trade	16 647	19 472	4 647	4 739	4 654	5 433	5 143	4 997	5 128
Hotels and restaurants	1 687	1 902	467	501	474	460	558	522	528
Transport via pipelines	8 609	6 086	766	1 549	2 299	1 472	1 224	1 586	1 878
Other transport and communications	14 691	19 831	4 667	4 530	4 930	5 705	5 018	5 282	5 461
Water transport	5 995	4 608	1 852	1 676	-502	1 582	1 027	1 094	1 317
Ocean transport.	5 362	4 043	1 676	1 546	-598	1 419	890	1 001	1 226
Inland water and coastal transport	633	565	176	130	96	163	137	93	92
Financial intermediation and insurance	3 336	3 870	937	974	946	1 013	963	939	1 003
Dwelling service	24 271	28 735	6 993	6 966	7 140	7 635	6 843	6 832	7 406
Business activities	6 664	7 914	1 922	2 032	1 935	2 024	2 121	2 131	2 203
Other private service activities	6 347	6 552	1 712	1 619	1 605	1 617	1 859	1 680	1 781
General government	28 276	29 164	6 129	6 342	7 384	9 309	6 626	6 745	7 873
Central government	13 929	13 488	2 947	2 905	3 332	4 304	3 192	3 047	3 521
Local government	14 347	15 676	3 182	3 437	4 052	5 005	3 434	3 698	4 352
Mainland industries.	124 732	145 816	32 759	35 026	36 552	41 478	35 051	36 536	39 171

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Table A10. Gross fixed capital formation by type of capital goods and economic activity.
Percentage change in volume from preceding year

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Gross fixed capital formation	6,9	4,5	7,1	0,3	-0,3	10,9	-0,3	0,0	7,5
Buildings and structures	15,3	14,2	31,8	24,4	3,3	5,4	-1,2	-6,6	-2,6
Oil exploration, drilling, pipelines for oil	5,1	-17,5	-29,9	-36,8	2,5	4,9	13,3	6,0	7,2
Oil platforms etc.	-24,3	-3,9	-1,0	-23,3	-8,9	25,7	-11,3	-3,6	5,1
Ships and boats.	-9,0	-33,9	-43,8	-11,7	-155,0	.	-43,5	-40,7	-280,8
Other transport equipment.	61,0	0,1	2,8	1,7	2,7	-6,4	17,0	30,5	20,0
Machinery and equipment	11,9	12,7	17,8	10,6	14,7	9,3	4,2	6,9	3,8
Agriculture.	17,3	9,0	11,6	7,7	6,9	11,4	2,0	4,5	2,6
Forestry and logging	0,0	0,1	0,6	-0,1	-0,0	-0,1	-0,6	-0,4	0,0
Fishing and fish farms	59,2	-22,8	-16,8	-20,7	-27,5	-30,2	13,8	-47,0	4,6
Oil activities	-14,3	-8,9	-6,7	-23,2	-13,3	12,4	-9,6	-1,8	4,1
Crude petroleum and natural gas extraction.	-11,8	-9,6	-12,2	-24,1	-10,9	13,8	-9,5	-0,2	1,8
Service activities incidental to oil and gas	-212,7	-52,4	-100,6	-103,0	-520,7	.	-49,1	.	-100,0
Mining and quarrying.	7,1	79,0	202,9	107,2	47,3	43,6	-30,4	-47,4	3,8
Manufacturing.	8,3	40,8	42,8	58,8	38,6	29,8	19,8	6,9	5,9
Food products, beverages and tobacco	1,8	13,5	3,5	40,8	0,6	12,0	1,6	-20,0	0,6
Textiles, wearing apparel and leather product.	-6,9	-5,4	49,3	-14,7	-14,5	-23,7	-28,7	-10,1	66,4
Paper and paper products.	-42,9	186,6	273,9	315,4	282,5	63,0	78,0	-24,8	-59,6
Printing and publishing.	21,0	-15,3	-0,4	-20,3	-39,0	-1,9	7,9	47,8	36,2
Petroleum refining	-45,0	51,0	178,5	158,0	12,2	-15,2	-24,8	-84,8	-29,7
Basic chemicals.	67,5	166,6	165,9	256,2	224,1	84,0	28,5	-35,5	-34,7
Chemical and mineral products	-1,8	24,1	26,5	14,4	61,5	6,0	21,7	24,0	12,7
Metal products	75,6	46,7	93,5	49,6	20,6	46,2	35,7	162,9	125,7
Machinery, ships and other transport equipm.	-5,1	12,3	14,4	2,2	5,6	26,0	10,0	31,1	2,6
Wood products, furniture and other manuf.	85,8	23,6	35,7	34,5	-6,3	42,6	30,2	53,9	101,4
Electricity, gas and water supply	-18,0	1,5	27,4	-7,7	-2,2	1,6	-6,6	-13,6	-12,8
Construction.	32,9	20,1	21,9	20,2	21,1	17,4	1,2	9,4	4,3
Wholesale and retail trade	25,1	14,8	27,4	18,9	7,6	8,6	8,0	5,4	7,1
Hotels and restaurants.	12,1	9,8	16,1	22,3	0,7	2,5	15,3	2,6	7,7
Transport via pipelines.	26,2	-32,0	-54,3	-56,7	-4,3	15,4	59,4	0,9	-18,1
Other transport and communications.	37,3	33,1	30,0	35,2	31,6	35,5	5,5	14,7	9,2
Water transport	-12,6	-30,6	-44,0	-8,4	-165,5	-921,1	-49,1	-38,9	-266,0
Ocean transport.	-12,2	-33,0	-45,8	-6,7	-181,3	-524,0	-51,7	-39,2	-237,2
Inland water and coastal transport	-16,4	-10,1	-17,7	-24,2	-12,9	25,3	-25,2	-34,4	-6,8
Financial intermediation and insurance	66,0	13,3	29,3	25,2	0,1	4,5	-0,1	-4,2	3,3
Dwelling service	34,9	12,7	31,6	19,4	6,1	-0,1	-6,1	-6,1	-0,8
Business activities	29,8	16,1	34,7	29,2	5,8	1,8	7,1	3,8	10,3
Other private service activities	4,8	0,0	15,0	7,7	-10,5	-8,6	5,9	3,1	8,4
General government	1,6	-0,5	3,1	3,0	5,0	-8,7	4,6	3,7	2,5
Central government	-1,5	-6,1	0,7	1,6	5,1	-20,4	4,9	2,4	1,0
Lokal government	4,7	4,9	5,6	4,2	5,0	4,7	4,3	4,7	3,7
Mainland industries.	17,2	13,5	22,6	18,7	10,4	5,9	3,9	2,4	4,0

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Table A11. Exports of goods and services. At current prices. Million kroner

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Exports	334 837	355 041	89 294	86 302	88 500	90 945	98 562	98 300	101 554
Goods	245 559	267 225	68 084	64 865	64 608	69 668	76 883	76 070	76 625
Crude oil and natural gas	106 440	113 231	28 000	28 003	26 353	30 875	34 589	36 962	38 903
Ships, new.	4 428	4 138	546	2 277	949	366	324	918	491
Ships, second-hand	5 247	5 791	1 358	685	2 251	1 497	1 504	598	364
Oil platforms and modules, new	11	63	12	1	46	4	11	12	25
Oil platforms, second-hand	850	492	27	37	254	174	36	172	12
Direct exports in relation to oil activities	61	97	23	24	25	25	24	24	30
Other goods	128 522	143 413	38 118	33 838	34 730	36 727	40 395	37 384	36 800
Agriculture, forestry and fishing	6 646	6 767	1 694	1 658	1 584	1 831	1 684	1 800	1 659
Mining and quarrying	2 331	2 271	540	548	556	627	662	594	528
Manufacturing products	118 853	133 131	35 556	31 390	32 277	33 908	37 478	34 775	34 516
Food products, beverages and tobacco	16 473	17 161	4 545	3 492	4 283	4 841	5 281	4 071	4 621
Textiles, wearing apparel etc.	2 206	2 138	616	506	489	527	546	515	537
Wood products	2 952	3 003	860	738	679	726	678	710	712
Paper and paper products	9 290	12 864	3 244	2 997	3 298	3 325	3 262	2 807	2 789
Printing and publishing	377	378	98	90	95	95	147	126	137
Refined petroleum products	13 476	12 988	3 677	3 568	3 206	2 537	3 931	4 036	4 145
Basic chemicals.	10 828	12 019	3 363	2 891	3 184	2 581	3 204	2 775	3 083
Chemical and mineral products	7 834	8 923	2 247	2 266	2 108	2 302	2 364	2 301	2 516
Metal products	26 241	29 798	8 308	7 204	7 053	7 233	8 159	7 723	7 048
Machinery and transport equipment	26 585	31 065	7 896	7 027	7 210	8 932	9 109	8 989	8 167
Other manufacturing products n.e.c.	2 591	2 794	702	611	672	809	797	722	761
Electricity	692	1 244	328	242	313	361	571	215	97
Services	89 278	87 816	21 210	21 437	23 892	21 277	21 679	22 230	24 929
Gross receipts from shipping	44 339	44 924	11 392	11 360	11 143	11 029	11 361	11 547	11 532
Gross receipts from oil drilling.	582	624	154	158	153	159	177	177	180
Direct exports in relation to oil activities	1 799	1 155	348	269	312	226	264	263	374
Transport via pipelines	2 065	2 176	571	493	450	662	736	685	684
Direct purchases by non-residents	15 740	15 127	3 300	3 469	5 664	2 694	3 215	3 455	5 746
Other services	24 753	23 810	5 445	5 688	6 170	6 507	5 926	6 103	6 413

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Table A12. Exports of goods and services.
Percentage change in volume from preceding year

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Exports.	8,2	3,8	6,8	2,0	5,8	0,8	9,1	9,7	7,6
Goods	11,1	6,1	9,6	4,6	9,8	1,2	11,8	12,3	8,9
Crude oil and natural gas	11,6	8,4	4,6	4,4	14,8	10,0	15,8	18,7	19,5
Ships, new.	37,1	-7,8	-30,0	672,4	-43,1	-79,4	-41,1	-60,0	-48,4
Ships, second-hand	-23,4	22,3	139,5	-42,3	225,6	-35,2	7,0	-22,5	-85,6
Oil platforms and modules, new	-98,7	450,4	66,1	-67,6	.	.	-9,8	.	-46,3
Oil platforms, second-hand	-20,0	-42,1	-95,8	-78,3	.	900,0	33,3	364,9	-95,3
Direct exports in relation to oil activities	-13,6	59,0	21,9	26,7	125,8	106,9	1,7	-4,3	16,3
Other goods.	13,1	4,1	15,1	1,1	2,1	-0,8	9,2	11,6	8,8
Agriculture, forestry and fishing	11,3	14,8	16,3	15,0	16,1	12,7	11,2	26,7	25,4
Mining and quarrying.	3,5	-2,2	-0,3	-5,9	-11,8	10,2	24,0	5,5	-4,6
Manufacturing products	13,8	3,3	15,0	0,3	1,3	-2,4	8,7	11,3	8,8
Food products, beverages and tobacco	18,3	2,2	8,9	-6,2	8,1	-1,8	16,3	17,1	7,2
Textiles, wearing apparel etc.	34,6	-5,0	40,7	11,2	-22,5	-27,1	-9,2	1,1	5,3
Wood products	3,0	-4,3	11,3	-11,6	-6,6	-8,9	-10,9	5,7	8,3
Paper and paper products	14,7	4,6	22,9	3,7	-2,1	-4,3	-2,7	3,8	7,7
Printing and publishing.	26,6	-15,9	0,9	-10,0	-7,5	-36,5	95,3	71,0	34,4
Refined petroleum products	26,8	-0,0	19,1	8,0	5,3	-28,8	-0,7	-1,6	9,9
Basic chemicals.	6,3	-3,2	13,0	-16,7	5,2	-11,7	6,4	2,5	2,9
Chemical and mineral products	14,7	7,5	25,9	6,4	-6,0	8,1	8,6	-2,8	17,3
Metal products	9,6	-4,7	6,6	-7,1	-12,2	-5,7	2,6	12,7	12,1
Machinery and transport equipment	11,1	14,7	19,1	10,6	12,2	16,5	20,7	24,0	7,4
Other manufacturing products n.e.c.	9,7	8,1	7,4	3,7	10,5	10,3	15,6	14,8	1,4
Electricity	-40,6	80,6	78,9	80,8	59,4	107,3	32,8	-52,8	-76,2
Services	0,6	-3,0	-1,5	-5,3	-4,3	-0,6	0,2	2,0	3,9
Gross receipts from shipping	-4,6	0,3	6,6	-0,4	-4,1	-0,4	-2,2	2,0	6,1
Gross receipts from oil drilling.	-30,2	4,4	-1,4	1,6	11,8	6,9	13,2	10,0	16,2
Direct exports in relation to oil activities	-2,6	-32,0	-35,2	-23,1	-28,2	-40,3	-26,8	-10,8	10,5
Transport via pipelines.	9,5	16,4	19,1	8,8	26,2	12,6	17,4	25,6	22,8
Direct purchases by non-residents	13,5	-5,8	3,2	-10,2	-11,9	4,8	-4,0	-2,3	-0,2
Other services	4,1	-6,7	-16,6	-11,0	3,0	-1,7	7,9	3,0	1,6

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NATIONAL ACCOUNTS FOR NORWAY

Table A13. Imports of goods and services. At current prices. Million kroner

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Imports	282 104	299 352	71 130	73 395	75 114	79 713	75 051	74 771	78 439
Goods	197 914	216 841	52 621	52 649	51 983	59 588	56 497	54 785	54 771
Ships	7 994	6 324	2 192	1 425	761	1 946	1 152	494	562
Oil platforms and modules	253	359	52	50	78	179	33	67	192
Direct imports related to other oil activitie	4 108	6 183	815	940	1 574	2 854	1 944	1 656	1 212
Other goods	185 559	203 975	49 562	50 234	49 570	54 609	53 368	52 568	52 805
Agriculture, forestry and fishing	6 998	7 890	2 168	2 100	1 663	1 959	2 300	1 908	1 728
Crude oil	867	1 121	326	356	270	169	218	255	169
Mining and quarrying	2 769	2 802	660	733	634	775	835	665	664
Manufacturing products	174 143	191 914	46 316	46 940	46 971	51 687	49 769	49 014	49 061
Food products, beverages and tobacco	8 374	8 927	1 874	2 313	2 449	2 291	2 163	2 340	2 505
Textiles, wearing apparel etc.	15 219	15 201	4 377	2 899	4 466	3 459	4 062	2 975	4 524
Wood products	3 519	3 883	993	988	880	1 022	948	1 032	999
Paper and paper products	5 263	6 469	1 608	1 573	1 594	1 694	1 693	1 544	1 487
Printing and publishing	2 529	2 799	676	624	687	812	836	717	861
Refined petroleum products	8 493	8 747	2 014	2 341	2 241	2 151	2 156	2 285	2 523
Basic chemicals	8 397	9 449	2 432	2 458	2 352	2 207	2 310	2 367	2 265
Chemical and mineral products	18 781	20 551	4 930	5 195	4 989	5 437	5 278	5 507	5 290
Metal products	19 703	21 043	4 964	5 361	5 008	5 710	5 588	5 417	4 734
Machinery and transport equipment	67 270	77 813	18 397	18 796	18 311	22 309	20 524	20 027	19 039
Other manufacturing products n.e.c.	6 092	6 587	1 594	1 452	1 513	2 028	1 686	1 555	1 658
Transport equipment not produced in Norway	10 503	10 445	2 457	2 940	2 481	2 567	2 525	3 248	3 176
Electricity	782	248	92	105	32	19	246	726	1 183
Services	84 190	82 511	18 509	20 746	23 131	20 125	18 554	19 986	23 668
Gross expenditures for shipping	18 606	19 284	5 000	4 789	4 802	4 693	4 993	5 193	5 175
Gross expenditures for oil drilling	902	1 331	238	330	430	333	362	292	310
Direct imports related to other oil activitie	6 721	4 257	674	1 554	1 312	717	795	1 092	792
Direct purchases abroad by residents	26 206	26 763	4 854	6 020	9 388	6 501	5 281	6 363	10 188
Other services	31 755	30 876	7 743	8 053	7 199	7 881	7 123	7 046	7 203

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Table A14. Imports of goods and services.
Percentage change in volume from preceding year

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Imports	6,9	5,1	4,9	3,6	4,1	7,8	4,6	0,1	3,3
Goods	9,9	9,0	8,8	6,7	8,0	12,5	6,6	3,6	4,9
Ships	-24,7	-15,9	-28,3	-35,0	-23,3	56,4	-48,9	-68,4	-33,8
Oil platforms and modules	-87,2	102,7	-43,5	18,7	.	228,6	-32,3	53,3	198,8
Direct imports related to other oil activitie	-32,8	45,9	-26,3	-26,6	88,0	187,8	134,8	73,0	-23,9
Other goods	15,0	9,2	12,6	9,8	7,1	7,7	7,2	4,6	6,1
Agriculture, forestry and fishing	34,6	7,0	30,3	24,9	-7,6	-11,9	3,4	-9,0	8,9
Crude oil	-17,5	32,0	48,5	66,9	30,8	-18,9	-38,7	-42,8	-57,3
Mining and quarrying	-4,8	2,0	-15,0	1,2	4,5	21,5	27,3	-16,0	-2,5
Manufacturing products	14,7	9,4	12,5	9,3	7,6	8,7	7,3	4,9	4,8
Food products, beverages and tobacco	0,2	4,0	-0,0	4,5	14,5	-3,0	11,2	-0,0	0,6
Textiles, wearing apparel etc.	11,0	1,6	14,9	2,6	-0,4	-10,7	-10,0	-0,0	-0,6
Wood products	27,0	3,2	32,4	2,2	-8,8	-5,1	0,0	6,1	15,2
Paper and paper products	12,0	5,9	10,8	4,2	4,0	4,6	-1,1	0,6	1,3
Printing and publishing	3,1	7,6	4,1	8,4	0,3	16,8	14,3	5,2	20,4
Refined petroleum products	7,0	9,0	15,4	-4,5	22,0	6,4	-0,4	-8,0	-6,8
Basic chemicals	15,2	8,3	15,4	2,3	5,4	11,2	9,2	0,6	3,2
Chemical and mineral products	10,6	9,9	14,9	10,3	5,8	9,1	10,5	7,0	8,7
Metal products	16,9	1,0	-6,1	6,7	-7,8	12,4	15,5	3,2	1,8
Machinery and transport equipment	16,7	17,0	21,4	15,1	17,4	15,0	10,8	9,0	4,7
Other manufacturing products n.e.c.	7,9	7,5	9,6	1,5	5,7	11,9	4,4	4,8	3,6
Transport equipment not produced in Norway	41,4	-3,8	-10,5	13,7	-10,0	-7,3	0,1	0,9	26,0
Electricity	707,0	-54,5	-68,2	-26,3	-30,2	-84,8	155,9	391,0	.
Services	0,4	-4,3	-5,1	-3,5	-4,0	-4,6	-1,3	-8,9	-0,5
Gross expenditures for shipping	-2,2	0,1	7,7	-2,4	-2,9	-1,5	-1,6	-1,8	5,5
Gross expenditures for oil drilling	-39,6	43,8	11,9	43,3	86,1	32,1	49,0	-14,3	-30,0
Direct imports related to other oil activitie	31,7	-38,4	-44,8	-31,9	-43,9	-33,0	17,3	-30,7	-39,6
Direct purchases abroad by residents	7,3	1,2	-2,5	0,8	3,9	0,8	4,7	0,3	4,5
Other services	-6,1	-5,3	-8,0	-0,8	-4,7	-7,8	-8,3	-15,4	-2,1

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NATIONAL ACCOUNTS FOR NORWAY

Table A15. Balance of payments. Summary. At current prices. Million kroner

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2	96:3
Exports.	334 837	355 041	89 294	86 302	88 500	90 945	98 562	98 300	101 554
Goods	245 559	267 225	68 084	64 865	64 608	69 668	76 883	76 070	76 625
Services	89 278	87 816	21 210	21 437	23 892	21 277	21 679	22 230	24 929
Imports.	282 104	299 352	71 130	73 395	75 114	79 713	75 051	74 771	78 439
Goods	197 914	216 841	52 621	52 649	51 983	59 588	56 497	54 785	54 771
Services	84 190	82 511	18 509	20 746	23 131	20 125	18 554	19 986	23 668
External balance	52 733	55 689	18 164	12 907	13 386	11 232	23 511	23 529	23 115
Primary income and transfers from abroad . . .	29 154	31 143	7 885	7 186	7 832	8 240	10 321	9 313	9 033
Interest	19 068	21 823	5 689	5 134	5 277	5 723	6 030	5 393	5 396
Dividends etc.	1 899	2 853	530	995	758	570	1 361	693	572
Reinvested earnings	-1 095	-2 179	-413	-811	-556	-399	43	796	861
Current transfers to Norway	9 282	8 646	2 079	1 868	2 353	2 346	2 887	2 431	2 204
Primary income and transfers to abroad	60 870	58 436	15 028	15 033	12 711	15 664	15 586	16 345	13 470
Interest	24 975	24 378	6 876	6 619	4 720	6 163	6 208	6 226	4 029
Dividends etc.	10 944	11 489	3 934	4 812	1 305	1 438	3 174	4 998	3 720
Reinvested earnings	4 170	1 953	-710	-1 112	1 934	1 841	1 283	-109	689
Current transfers from Norway	20 781	20 616	4 928	4 714	4 752	6 222	4 921	5 230	5 032
Primary income and transfers from abroad, net. .	-31 716	-27 293	-7 143	-7 847	-4 879	-7 424	-5 265	-7 032	-4 437
Current external balance, net	21 017	28 396	11 021	5 060	8 507	3 808	18 246	16 497	18 678
Revaluation	2 672	10 092	6 613	54	-8 687	12 112	-789	2 574	2 107
Total net inflow on capital transactions.	-1 084	-1 224	-56	-79	-66	-1 023	-17	-42	-45
Decrease in the net debt of Norway	22 605	37 264	17 578	5 035	-246	14 897	17 440	19 029	20 740

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