Economic Survey

Statistics Norway
Statistisk sentralbyrå

3/96

Economic trends

- National accounts for 1 and 2 quarter 1996
- Overview of international and Norwegian economic developments
- Forecasts for the Norwegian economy for 1996 and 1997

Articles

- Distributional efficiency of direct taxation
- Leaving the parental home

Economic Survey

3/96

Volume 6

Contents

The cut-off date for information used in the publication was 3 September 1996.

Inquiries should be directed to Knut Moum, tel. 22 86 48 20, e-mail: knm@ssb.no or Mette Rolland, tel.: 22 86 48 18, e-mail: mrd@ssb.no, telefax: 22 11 12 38.

Economic trends is available on internet at http://www.ssb.no

Economic Survey

Editorial board: Ådne Cappelen (ed.), Knut H. Alfsen, Iulie Aslaksen, Helge Brunborg, Bodil M. Larsen, Kjersti-Gro Lindquist, Knut Moum, Tor Skoglund. **Editorial assistant:** Wenche Drzwi, tel.: 22 86 49 74, telefax: 22 11 12 38. **Design:** Enzo Finger Design. **Print:** Falch Hurtigtrykk. **Editorial address:** Statistics Norway, Research Department, P.O. Box 8131 Dep., N-0033 Oslo. **Sales- and subscription service:** P.O. Box 8131 Dep., N-0033 Oslo, tel.: 22 86 44 80, telefax: 22 86 49 76.

Economic Survey

is published four times a year by the Research Department of Statistics Norway. The Research Department was established in 1950. The Department has about 90-100 employees (January 1996). The Research Department is today organized in four divisions. Acting Head of Department is *Ådne Cappelen.*

- Division for public economics
  Director of Research Nils Martin Stølen

- Public economics, taxes
- Labour market analysis
- Micro simulation models

- Division for macroeconomics
  Director of Research Ådne Cappelen

- Business cycle analysis
- Macroeconomic models
- General equilibrium models

- Division for resource and environmental economics
  Director of Research Knut H. Alfsen

- Environmental economics
- International energy markets
- Petroleum and energy analysis

- Division for microeconometrics
  Director of Research Jørgen Aasness

- Consumer and producer behaviour
- Income distribution analysis
- Econometric methods

The next edition of Economic Survey will be published at the end of December 1996.

Symbols in Tables	Symbol
Data not available	..
Not for publication	:
Nil	0
Provisional or preliminary figure	*

Economic trends

Preliminary national accounts figures indicate that output and demand slowed somewhat in the second quarter of 1996, after rising fairly briskly the previous quarter. Consumption and investment in the mainland economy were approximately unchanged, and traditional merchandise exports declined. Exports of crude oil and natural gas rose, however, and contributed to moderate growth in GDP. The sharp growth in employment through the last three years continued in the second quarter of 1996, and unemployment continued to move on a downward trend. Up to end-August this year price inflation was noticeably lower than in 1995, and below the level among Norway's main trading partners. High oil prices along with a continued expansion in exports of oil and gas made a substantial contribution to a record-high surplus on the current account in the first half of the year.

Despite appreciably lower growth in production and demand between the first and second quarter, growth in the Norwegian economy is still likely to be stronger in 1996 than last year. On an annual basis, the rise in total exports may approach the level recorded in the peak year 1994, partly as a result of the vigorous rise in oil and gas exports. Our projections also entail a considerably sharper rise in private consumption in 1996 than in 1995, largely as a result of higher car purchases. Mainland investment, however, will probably expand at a slower pace this year than during the previous two years. This means that the projections for mainland GDP growth in 1996 are only moderately higher than last year. A steep rise in the production of crude oil and natural gas, however, will boost the growth rate for total GDP to the high level recorded in 1994. The forecasts thus indicate that 1996 will be the sixth consecutive year of growth in the Norwegian economy which is above the average for OECD countries. Both government budgets and the current account of the balance of payments will show higher surpluses than expected earlier, primarily as a result of high oil prices.

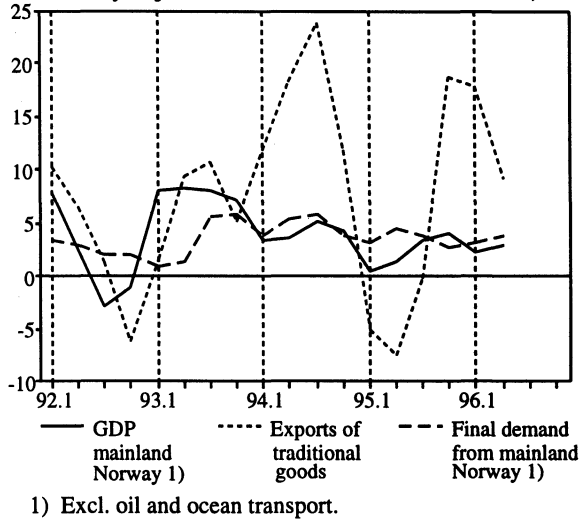
So far, the buoyant growth in the Norwegian economy has not generated wage and price inflation that would over time result in a disquieting loss of market shares for Norwegian producers. True, our forecasts show that average real wages will increase at a faster pace than productivity in the mainland economy this year, but the situation appears to have been the reverse through the previous five/six years. The strong rise in employment the last few years has been accompanied by growing labour force participation, but as a share of the working-age population the labour force is still below the level recorded in 1987/1988. This may indicate that employment gains also in the period ahead will be partly offset by an expansion in the labour force. In line with this, our projections indicate that the fall in unemployment in both 1996 and 1997 will continue at the same moderate pace as during the previous three years. A projected unemployment rate next year of a little more than 4 per cent is still so high that a further moderate decline will have no strong wage effects.

Main indicators for the Norwegian economy
Growth from previous year. Per cent

	1995	1996	1997
GDP	3.3	4.3	2.3
-mainland Norway	2.7	3.0	2.4
Consumption in households and non-profit organizations	2.6	3.5	2.7
Unemployment rate[1)]	4.9	4.5	4.2
Consumer price index	2.4	1.4	2.2

1) Level in per cent.

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



1) Excl. oil and ocean transport.

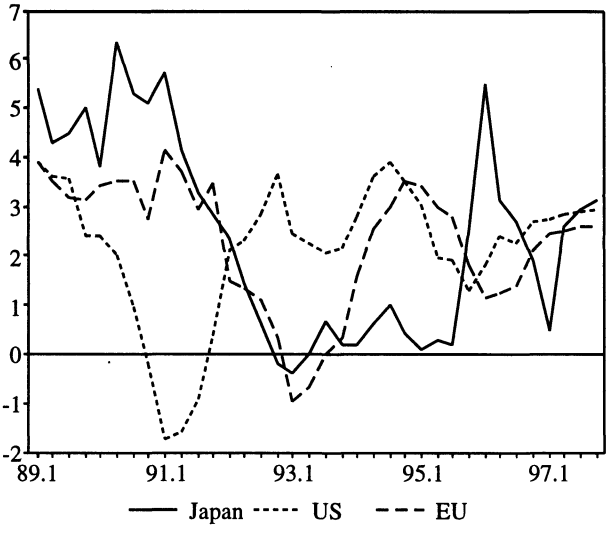
Source: Statistics Norway.

International economy

Continental Europe experienced a slowdown in activity last autumn. A lack of domestic growth impulses after exports were reduced was probably the main reason for this development. A tight fiscal policy and high real interest rates are curbing domestic demand in some large European countries. In the first half of 1996 there were some signs of improvement, particularly in Germany, but 1996 is still likely to be a cyclically sluggish year for continental European countries. Last year the US avoided a traditional cyclical trough with a fall in GDP, and moderate growth is expected this year. Experience from earlier business cycles in this economy indicates that there may be a basis for slightly higher growth next year even though the expansion will not be particularly robust. In Japan, there are also clear signs of an improvement in the economic situation, although it is unlikely that the Japanese economy will see a resumption of the high growth rates recorded in the 1980s, partly because there is now a need for fiscal policy tightening. The upturn in the US and Japan, however, may contribute to somewhat higher growth in Europe in the period ahead.

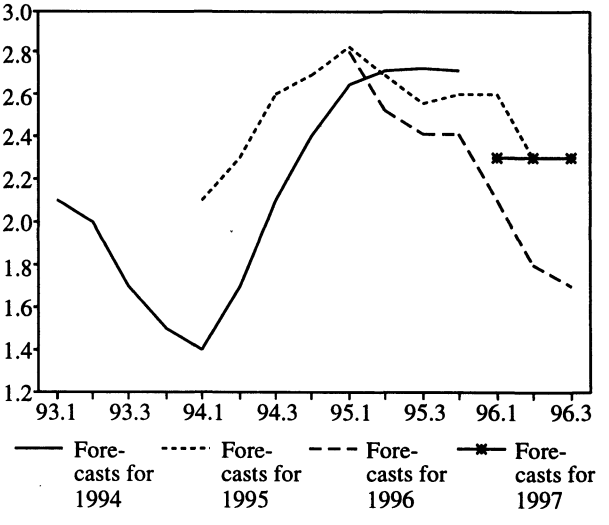
In *Germany*, GDP fell by a seasonally adjusted 0.5 per cent from the fourth quarter of 1995 to the first quarter of 1996, partly due to an unusually cold winter. The eastern länder of Germany were particularly adversely affected, recording a decline of 2.5 per cent. Some short-term indicators, however, point to an increase in the growth rate through the spring and summer. The decline in interest rates will probably stimulate the economy even though real interest rates remain high. Moreover, a depreciation of the Deutsche Mark (particularly against the US dollar) in the first half of 1996 improved the prospects for higher exports. Very low wage increases this year indicate improved business profitability, and tax reliefs may result in higher disposable income. All in all, GDP growth is expected to pick up markedly in the second half of 1996 and into 1997. Output in *France* fell in the fourth quarter of 1995, but national accounts figures for the first quarter of this year showed that GDP grew by a seasonally adjusted 1.2 per cent from the previous quarter. However, the leap-year effect accounted for about 1/2 per cent and part of the increase probably also reflected a catch-up in activity following the strikes in December. Short-term data indicate a weaker trend in the second and third quarter, and there is little likelihood of a robust recovery this year. This must partly be viewed in connection with private consumption, which is being curbed by tax increases and other austerity measures. *Italy* also recorded a decline in output in the last quarter of 1995. Fuelled by exports, GDP growth picked up in the first quarter of this year, rising by 0.5 per cent from the previous quarter. In the second quarter, however, GDP growth fell again and economic growth in 1996 as a whole is expected to be relatively low. Domestic demand is sluggish as a result of moderate real wage growth and continued high unemployment. An appreciation of the lira of about 10 per cent in relation to the average for 1995 is expected to have a dampening effect on exports in the period ahead. In the *UK*, GDP expanded by 0.9 per cent from the fourth quarter of 1995 to the first quarter of 1996, primarily underpinned by a rise in private consumption. Domestic demand is expected to contribute to higher growth in GDP, particularly next year. This must be viewed against the background of the general election which must be held by May 1997, and which may result in a more expansionary monetary and fiscal policy.

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



Source: NIESR and Statistics Norway.

GDP-growth forecasts for Norway's main trading partners for 1994 - 1997 given on different dates



Source: Consensus Forecasts.

Preliminary national accounts figures show that GDP in the *US* expanded by 4.8 per cent (s.a.a.r) in the second quarter of 1996 following growth of 2.0 per cent in the first quarter. Public consumption and residential construction made the greatest contribution to growth, but private investment and exports also provided a positive impetus. The budget for 1997 implies no further growth in public consumption. Short-term data for July, however, point to a continued high growth rate in the US economy. Our projections indicate that higher growth in private consumption will be the main driving force in economic activity in the period ahead. For 1996 as a whole, GDP is expected to rise by a little less than 2.5 per cent, while GDP growth is projected to be slightly higher in 1997.

In *Japan*, preliminary national accounts figures show a GDP growth of 12.7 per cent (s.a.a.r.) in the first quarter of 1996. The growth rate, however, was inflated by about 3 percentage points because the seasonal adjustment does not take account of the leap-year effect. The figures also show that the brisk growth was primarily spurred by domestic demand, particularly housing investment and public sector investment. This must be seen in conjunction with the many economic stimulus packages launched by the Japanese authorities during the four-year recession. The latest measures were announced in September 1995 and there are many indications that the effect was largely concentrated in the first half of this year. As the effect of government measures gradually wanes, private domestic demand is expected to take over as the main driving force in the economy. Moreover, an increase in net exports is likely to make a positive contribution as a result of the depreciation of the yen which has taken place since last autumn. Inasmuch as the effect of the expansionary fiscal policy was more concentrated in time than expected, we have made some revisions of our projections for Japan compared with those presented in Economic Survey 2/96. GDP is now expected to rise by a good 3 per cent this year, slowing to about 2.5 per cent in 1997 as a result of fiscal tightening.

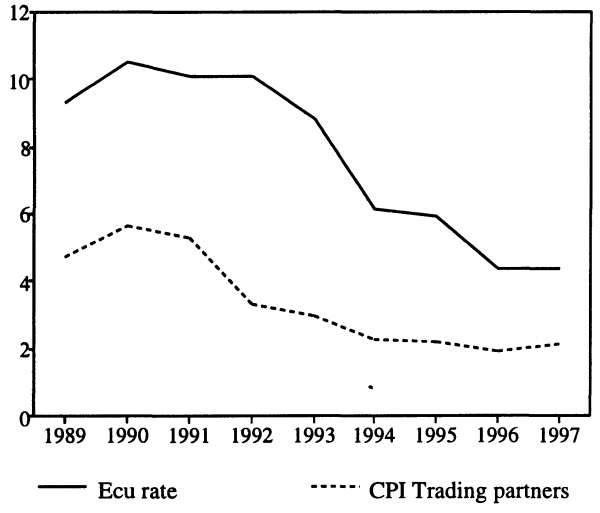
After national accounts figures showed that 1995 was a peak year for *Sweden*, growth in 1996 was expected to be considerably slower at the beginning of the year. New information now indicates that the slowdown in the growth rate was weaker and briefer than assumed earlier. Figures from the first half of 1996 indicate that GDP expanded by close to 2 per cent (s.a.a.r.). Net exports and private investment made the greatest contribution to the expansion, while public and private consumption exhibited a sluggish trend. A stronger krona, however, will probably curb exports later this autumn. Domestic demand is also expected to be a more important driving force in the economy inasmuch as high wage increases accompanied by low price inflation will provide scope for a substantial growth in real wages. A sharp decline in interest rates is also expected to generate some stimulus, and the forecasts indicate a rise in GDP of more than 2 per cent in 1997. In *Denmark*, growth tapered off during the second half of 1995, primarily as a result of the slowdown in the German economy which had a negative impact on Danish exports. However,

Economic forecasts for Norway's main trading partners
Annual per cent change

	1995	1996	1997
USA			
GDP	2.0	2.3	2.8
Private consumption deflator	2.3	2.2	2.7
Short term interest rate (level)	5.9	5.4	6.2
General government budget deficit[1)]	-1.9	-1.5	-1.5
Japan			
GDP	0.9	3.3	2.3
Private consumption deflator	-0.4	0.4	1.3
Short term interest rate (level)	1.2	0.7	1.6
General government budget deficit[1)]	-4.3	-5.4	-4.8
Germany			
GDP	1.9	0.8	2.3
Private consumption deflator	2.0	1.6	1.6
Short term interest rate (level)	4.5	3.3	3.7
General government budget deficit[1)]	-3.6	-3.6	-3.0
France			
GDP	2.2	1.4	2.0
Private consumption deflator	1.7	2.0	1.8
Short term interest rate (level)	6.6	4.2	4.3
General government budget deficit[1)]	-5.0	-4.3	-3.4
United Kingdom			
GDP	2.5	2.3	3.0
Private consumption deflator	3.4	2.3	2.5
Short term interest rate (level)	6.7	5.8	5.5
General government budget deficit[1)]	-5.5	-4.0	-3.4
Italy			
GDP	3.0	1.0	1.8
Private consumption deflator	5.4	4.0	3.5
Short term interest rate (level)	9.0	7.7	7.4
General government budget deficit[1)]	-7.9	-6.7	-5.3
Sweden			
GDP	3.0	1.5	2.2
Private consumption deflator	2.9	1.3	1.9
Short term interest rate (level)	8.7	6.0	5.0
General government budget deficit[1)]	-8.1	-3.8	-2.3
Denmark			
GDP	2.8	1.1	2.2
Private consumption deflator	1.8	2.3	2.4
Short term interest rate (level)	8.3	7.6	7.8
General government budget deficit[1)]	-1.6	-1.7	-1.2
The Netherlands			
GDP	2.4	2.0	2.6
Private consumption deflator	2.0	2.5	2.2
Long term interest rate (level)	4.4	3.2	3.7
General government budget deficit[1)]	-3.5	-3.2	-2.9
Memorandum items:			
GDP trading partners	2.3	1.7	2.3
CPI trading partners	2.2	1.9	2.1
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.

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



Source: Statistics Norway.

preliminary national accounts figures for the first quarter of 1996 indicate that growth is again picking up. GDP expanded by a seasonally adjusted 0.5 per cent from the fourth quarter of 1995, bolstered in particular by private consumption. Short-term data indicate that consumption growth remains high, probably as a result of high real wage growth. Investment in connection with the Øresund and Storebelt bridge projects is also expected to generate a positive impetus to growth in the period ahead. Higher activity in the oil and gas sector will also contribute to a rise in GDP of more than 2 per cent in 1997.

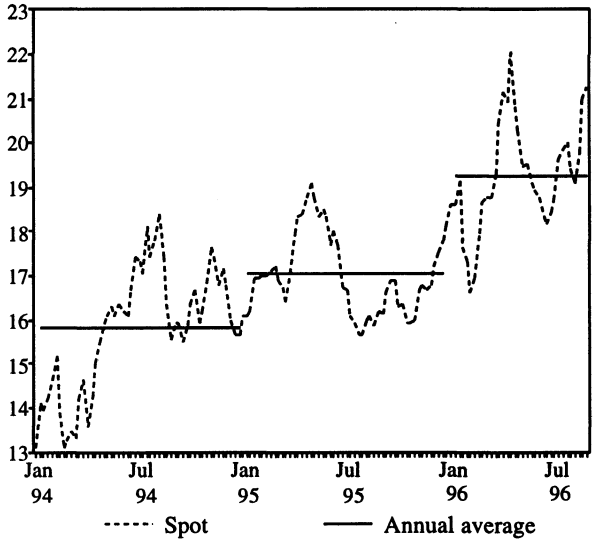
The forecasts indicate that *price inflation* among Norway's main trading partners will be about 2 per cent in both 1996 and 1997. In European countries, the low level of activity and high unemployment are generally contributing to very moderate inflation, with the projections for the rise in consumer prices ranging between 1.5 and 2.5 per cent for most countries. One exception is Italy where consumer price inflation has been relatively high. However, the inflation rate in Italy now seems to be edging down, and the 12-month rise in July was 3.6 per cent. The forecasts indicate that inflation may be reduced to 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. In Sweden, the VAT rate was reduced from 21 to 12 per cent from 1 January 1996, which has resulted 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 decline in consumer prices. An increase in other indirect taxes, including a higher property tax, is expected to push up consumer price inflation by a quarter of a percentage point in both 1996 and 1997. Against this background, inflation is projected at about 1 1/2 per cent this year, while the forecasts point to inflation of more than 2 per cent next year. Consumer price inflation in the US still shows few signs of quickening. As a result of low unemployment (5.4 per cent in July), many analysts have feared that higher wages will generate upward pressure on prices. Available statistics for the first half of 1996 indicate, however, that total labour costs only rose by a little less than 3 per cent. Price inflation is therefore expected to be moderate this year, but will probably pick up slightly in 1997 as a result of the projected expansion in economic activity. Following a period of falling prices in Japan, price have increased in recent months with a year-on-year rise of 0.6 per cent in July. Inflation will probably edge up as output gradually expands.

As a result of lower economic activity in continental Europe, *monetary policy* has gradually become less contractionary over the last six months. In Germany, the central bank lowered its discount rate and Lombard rate 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, and the central bank cited slowing money supply growth, low price inflation and a hesitant economic recovery as the reasons for the reduction. A weaker Deutsche Mark, which is expected following the interest-rate reduction, will be favourable for German exporters. 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 cutting its official rates. Since December, 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 monetary union between these countries. In Italy, the central bank's interest rate was unchanged from April 1995 until favourable inflation figures resulted in a reduction of 0.75 percentage point in the discount rate, to 8.25 per cent, in August this year. Despite the lack of interest-rate cuts by the central bank, market rates fell by about 2 percentage points in the period, but have levelled off somewhat during the summer months. The central bank in Sweden has cut its repo rate a number of times since the beginning of 1996, most recently to 5.25 per cent on 27 August. The interest-rate cuts must be viewed in connection with the bank's inflation target (of 1-3 per cent) and the substantial decline in the inflation rate since last autumn. The decline in interest rates in Sweden has been pronounced; money market rates have fallen by 3 percentage points in the course of six months. In the UK, base rates have been reduced on four occasions (each by 0.25 percentage point) since December 1995, most recently in June to 5.75 per cent. The reason is probably that inflation is low and there are no visible signs of increasing price pressures in the economy. Further cuts in interest rates are not inconceivable, particularly with a view to the coming election. Even though nominal short-term rates are now very low in Europe, real interest rates (particularly long-term) are still at an historically high level. This is related to very low price inflation as well as the fact that interest rates are also influenced by developments in the US capital market.

The US Federal funds rate has been reduced three times since July last year, most recently to 5.25 per cent in January 1996. As a result of higher economic activity, the Federal Reserve is expected to conduct a tighter monetary policy in the period ahead. Historically, however, the Federal Reserve has not changed interest rates just before a presidential election, and we therefore expect the funds rate to remain at its current level until after the election in November. Short-term rates are likely to rise in 1997. In Japan, the economic slump over the past 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 which now seems to be under way 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 set out in the Maastricht treaty, thereby paving the way for monetary union. Sluggish economic trends the past year have made it more difficult than expected to satisfy these criteria by the deadline and several countries have tightened fiscal policy. In Germany, the government budget deficit in 1995 was equivalent to 3.5 per cent of GDP, and this year government finances have deteriorated as a result of lower tax revenues and higher social security payments. The Government has presented a savings package for 1997 which contains a number of proposals to curb public spending. All in all, the package entails a reduction in expenditure of DM 70 billion, distributed as 25 billion at both the federal and local level and 20 billion on the social security budget. Altogether, the tightening is equivalent to about 2 per cent of GDP. The package has not yet been approved by the Forbundsdag, and 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. For example, public sector spending growth shall be limited to 1.8 per cent in nominal terms this year, partly by freezing pay scales for government employees. A new income tax was introduced in February 1996 and petrol taxes will be raised. Against this background, the deficit this year is expected to be reduced to close to 4 per cent. Additional tightening has been proposed for 1997. The budget deficit in the UK also appears to have been reduced substantially this year even though tax revenues have been lower than expected. With an approaching general election, however, it is not inconceivable that the November budget will contain expansionary fiscal measures. The country's opt-out protocol for monetary union means that the UK is not subject to the constraints of the Maastricht criteria to the same extent as other large EU countries. In Italy, the new administration has a target of reducing the budget deficit to less than 6 per cent of GDP in 1996, from 7.2 per cent last year. Even though lower interest rates will reduce the debt burden, the sluggish economic trend will make it difficult to achieve the target for the budget deficit this year. In Sweden, the authorities have been tightening policy for several years,

Spot price, Brent Blend 1994-1996
Dollar per barrel



Source: Petroleum Intelligence Weekly

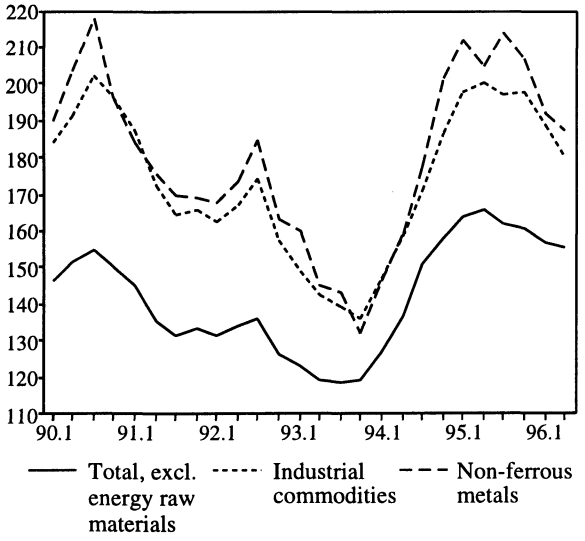
and this has contributed to a considerable improvement in government finances. The budget deficit is expected to fall from about 8 per cent of GDP in 1995 to about 4 per cent this year. Even though the general-government gross debt is still relatively high (about 85 per cent of GDP), this means that Sweden will probably be eligible to participate in the planned monetary union.

Despite a substantial increase in government procurement in the second quarter of this year, fiscal tightening in the US appears to continue. As a result of higher than expected tax revenues, partly reflecting a pronounced growth in capital gains taxes in the wake of the stock market rally last year, it now appears that the federal budget deficit for this fiscal year will be about $ 112 billion, the lowest since 1981. However, 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. As activity gradually picks up, fiscal policy is expected to be tightened. The authorities have announced that the VAT rate 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 agreement signed by the UN and Iraq in May has created uncertainty in the oil market. The agreement permits exports of Iraqi oil equivalent to $ 2 billion over a six-month period. With an oil price of about $ 20 p/b, this corresponds to exports of between 0.6-0.7 million b/d. It was first assumed that exports would start in July, but Iraq has delayed satisfying the conditions of the agreement. It

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



Source: HWWA-Institut fur Wirtschaftsforschung.

seemed likely that exports could start at the end of September, but unrest in Kurdish areas of Iraq has resulted in another postponement. There is some uncertainty as to how OPEC will respond to Iraq's market entry. The question is whether the other OPEC countries will provide scope for Iraq's exports within the existing overall quota or whether exports from Iraq will come in addition. In June, OPEC decided to maintain the quotas for other member countries, but both volume and price policies are a constant subject of discussion within the cartel.

The spot price of Brent Blend so far this year has fluctuated around a relatively high level (about $ 19.50 p/b on average). The cold weather resulted in a sharp rise in prices in the first few months of this year, reaching a high of $ 22 p/b in mid-April. Later in May and up to mid-June, the spot price fell considerably, partly as a result of the agreement between the UN and Iraq. However, when it became clear that Iraq's market entry would be delayed, prices again rose. At the beginning of September the spot price was quoted at more than $ 21 p/b, influenced by the unrest in Iraq.

It is difficult to project the direction of spot prices in the period ahead. The cold winter resulted in a considerable drain of oil stocks. Later in the summer stocks had been rebuilt to some extent, but total stocks are still below the levels at the same time in 1996 and 1995. In addition, demand from Asian countries has risen substantially. On the other hand, IEA expects the current excess supply to increase in the wake of Iraq's market entry. Even though it is difficult to estimate the level of prices, it is reasonable to assume a flatter price curve when Iraq's market re-entry is clarified, since reduced uncertainty tends to have a stabilizing effect on prices.

Other commodity markets

Prices of commodities, excluding energy, peaked in the summer of 1995. Over the past year prices have moved on a downward trend, with prices of some metals recording a sharp decline in June and July this year. According to the HWWA, commodity prices (excluding energy) fell by 12 per cent in the 12 months to July 1996. The decline must be viewed in connection with sluggish cyclical trends in Europe and, in recent months, the special conditions in the metal market as well.

Metal prices fell considerably in June and July of this year following a relatively stable trend earlier in 1996. The Japanese trading company Sumitomo disclosed considerable losses as a result of speculation in the copper market. Fears that the company would be forced to sell its substantial stocks of copper resulted in a sharp decline in prices in mid-June. Since this event, there has also been a fall in prices of other non-ferrous metals such as lead, tin, zinc and nickel, while aluminium prices were not affected to any extent. In July, copper prices stabilized again and there were signs of a slight rise in prices towards the end of the month.

Farm-based industrial commodities have fallen steadily thus far this year and are now about 20 per cent below the level seen one year ago. Prices of wood products have declined considerably, primarily as a result of low activity in residential construction, particularly in Germany but also in the UK and France. Pulp prices have also fallen considerably as a result of a decline in new orders in North America and Europe. Prices of wool and cotton edged down in the autumn of 1995, and it appears that the sluggish trend has continued this year.

Prices of food and beverages are at about the same level as one year earlier after exhibiting a somewhat unsteady price trend so far this year. At the beginning of 1996, for example, wheat prices increased, partly as a result of a drought in the US, but when the weather situation improved prices began to fall again. Moreover, wheat production is expected to be higher this year in countries like Canada, India and Pakistan, as well as in the EU area. Other food prices have also dropped as a result of an increased supply, particularly coffee prices.

Stronger economic growth in Japan this year and the prospect of a weak economic upturn in Europe indicate that commodity prices will not fall further in 1996. The special conditions in the metal market, however, may result in an unstable price trend in the period ahead, with the possibility of a further fall in prices if investment companies withdraw from the market. The German HWWA institute projects an average decline in prices of 7 per cent in 1996 and a rise of 5 per cent next year.

Norwegian economy

Developments thus far in 1996

According to preliminary figures from the quarterly national accounts, growth in the Norwegian economy slowed somewhat between the first and second quarter of 1996, adjusted for normal seasonal fluctuations. GDP grew by a seasonally adjusted 0.3 per cent in the second quarter after rising by 1.6 per cent in the previous quarter. Gross output and demand in mainland Norway also grew at a slower pace in the second quarter than in the first quarter. So far this year mainland GDP growth has been lower than the growth recorded through 1995, whereas the reverse was the case for demand. However, nearly half of the rise in demand from mainland Norway between the second half of 1995 and first half of 1996 has its counterpart in higher car purchases by households.

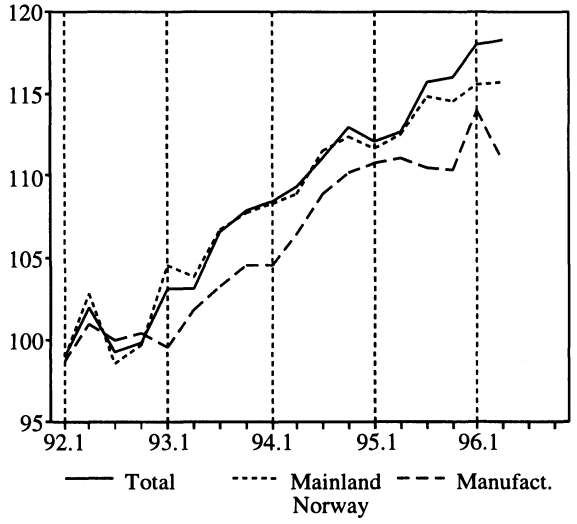
Manufacturing output fell markedly in the second quarter after expanding sharply in the previous quarter. This development can only partly be ascribed to the strikes in May. A steep fall in electricity production as a result of reduced run-off to reservoirs also contributed to the weak growth in mainland GDP in the second quarter. Production in services industries, on the other hand, continued to expand.

Movements in manufacturing production over the past year must - in addition to the strikes in May - be viewed in connection with developments in traditional merchandise exports. After moving on a fairly weak trend through 1995, these exports picked up markedly in the first quarter of 1996, both in value and volume terms. The volume of exports fell slightly in the second quarter, whereas prices generally edged up. Three fourths of the decline in export volumes between the first and second quarter can be ascribed to reduced exports of electricity and refined petroleum products as a result of special supply-side conditions. Exports of processed farm and fish products and chemical raw materials also declined. Despite the strike in the engineering industry in May, exports of engineering products rose by a seasonally adjusted 0.7 per cent in the second quarter. Through the previous three quarters, however, exports of these goods rose by an average 7 per cent per quarter. For the first half of 1996 as a whole, exports to the US, the UK and some countries outside the core of Norway's main trading partners showed a pronounced rise compared with the same period one year earlier. Exports to Germany and Italy, on the other hand, exhibited a sluggish trend.

Private consumption (consumption in households and non-profit organizations) was approximately unchanged between the first and second quarter after rising markedly in the previous quarter. Developments must be viewed in connection with changes in car taxes and the temporary rise in the deposit refund for scrapped cars for this year. Household purchases of transport equipment rose by nearly 40 per cent, seasonally adjusted, between the fourth quarter of 1995 and first quarter of this year after declining about 8 per cent in the previous quarter. However, no further growth was recorded in the second quarter of 1996, but seasonally adjusted new car registrations for July and August indicate a moderate rise during the current quarter. The growth for other consumption groups showed no change between the first and second quarter following a sharp slackening of growth towards the end of last year.

Preliminary estimates indicate that mainland investment was unchanged between the first and second quarter following an average growth of less than 1 per cent through

Gross domestic product
Seasonally adjusted volume indices, 1992=100



Source: Statistics Norway.

Exports
Seasonally adjusted volume indices, 1992=100

Source: Statistics Norway.

Macroeconomic indicators[1)]
Growth from previous period unless otherwise noted. Per cent

			Seasonally adjusted			
	1994	1995	95.3	95.4	96.1	96.2
Demand and output						
Consumption in households and non-profit organizations	4.1	2.6	1.6	-0.2	2.2	-0.0
General government consumption	0.7	0.2	0.3	0.1	1.0	0.6
Gross fixed investment	6.9	4.5	-4.1	9.3	-5.2	2.8
- mainland Norway	17.2	13.5	1.3	0.7	1.3	0.0
- petroleum activities	-7.3	-13.1	2.4	15.3	-20.4	12.9
Final domestic demand from mainland Norway[2)]	5.2	3.8	1.2	0.0	1.8	0.1
Exports	8.2	3.8	4.0	1.4	4.0	-0.6
- crude oil and natural gas	11.6	8.4	3.9	10.4	1.2	2.2
- traditional goods	13.1	4.1	4.5	-0.9	11.0	-2.5
Imports	6.9	5.1	-0.5	2.6	-1.9	0.8
- traditional goods	15.3	9.1	1.4	0.2	2.9	-0.1
Gross domestic product	5.0	3.3	2.7	0.3	1.6	0.3
- mainland Norway	4.3	2.7	2.1	-0.3	1.0	0.1
Labour market[3)]						
Man-hours worked	0.9	1.2	0.0	1.4	0.1	0.3
Employed persons	1.2	2.1	0.7	1.0	0.8	0.8
Labour force	0.9	1.6	0.3	0.5	1.4	0.3
Unemployment rate, level	5.4	4.9	4.7	4.3	4.8	4.4
Prices						
Consumer price index[4)]	1.4	2.4	2.3	2.2	0.9	1.0
Export prices, traditional goods	1.1	7.1	-0.3	-0.2	-1.3	0.7
Import prices, traditional goods	0.3	0.7	-0.2	0.3	0.1	0.1
Balance of payment						
Current balance, bill. NKr	21.0	28.4	8.5	3.8	18.3	16.1
Memorandum items (unadjustd, level):						
Eurokrone rate (3month NIBOR)	5.7	5.4	5.3	5.2	5.1	4.7
Average borrowing rate[5)]	8.3	7.8	7.8	7.7	7.6	7.5
Crude oil price, NKr[6)]	111.7	107.5	102.0	105.9	119.1	127.1
Importweighted krone exchange rate (1993=100)	100.5	98.1	97.8	98.4	98.4	98.6

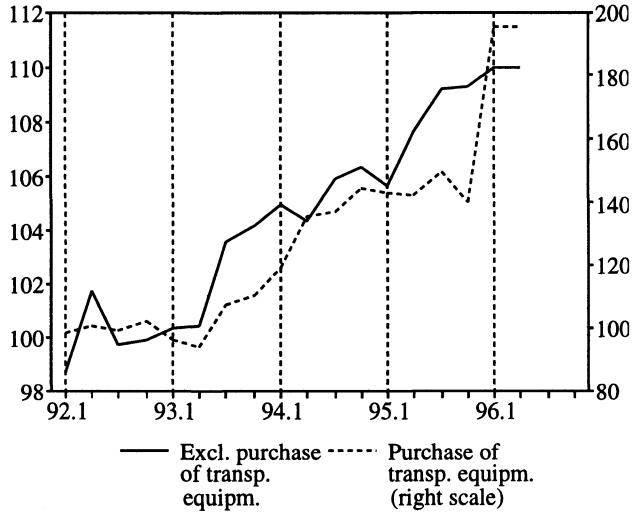
1) Figures for 1994 and 1995 may deviate somewhat from those published in Economic Survey 2/96 due to new information.
2) Consumption in household and non-profit organications + general government consumption + gross fixed capital formation in mainland Norway.
3) Based on monthly figures, seasonally adjusted.
4) Percentage change from previous year.
5) Households' borrowing rate in private financial institutions.
6) Average Norwegian production.
Source: Statistics Norway.

the four previous quarters. This demand component thus shows signs of levelling off after rising sharply through 1994 and into 1995. Manufacturing investment, however, continues to expand, and the investment intentions survey for the third quarter of 1996 indicates that this investment will remain high in the period ahead. General-government investment appears to have declined slightly in the second quarter after rising briskly in the previous quarter. The implementation of the school reform will probably contribute to growth through the remainder of the year and in the first half of 1997. Investment in private services edged up in the second quarter, while the decline in housing investment persisted. The development in housing investment reflects a downward trend in the figures for housing starts through 1995, although this now appears to have levelled off. The situation for housing starts may be related to a shortage of serviced sites, particularly in some urban areas, as prices of resale homes continue to rise. According to Statistics Norway's price statistics, the real price of existing homes increased by about 1 per cent between the fourth quarter of 1995 and first quarter of this year after rising by 5 per cent in 1995 and more than 11 per cent the previous year. The square metre price of homes sold through estate agents increased by a greater margin than Statistics Norway's price index for existing homes in the first quarter of 1996, and the sharp rise continued in the second quarter. According to estate agents, the average price of existing homes was in real terms 7 per cent above the average for last year.

Petroleum investment picked up again in the second quarter of 1996 after declining in the previous quarter. Investment statistics for the third quarter indicate that petroleum investment will increase further during the remainder of the year.

Consumption in households

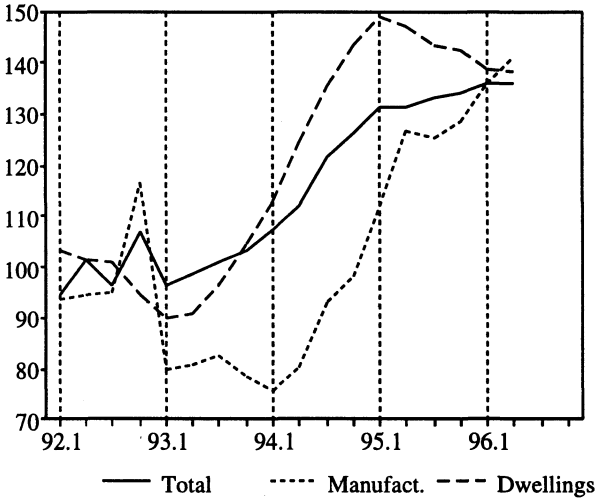
Seasonally adjusted volume indices, 1992=100



Source: Statistics Norway.

Gross fixed capital formation, Mainland Norway

Seasonally adjusted volume indices, 1992=100



Source: Statistics Norway.

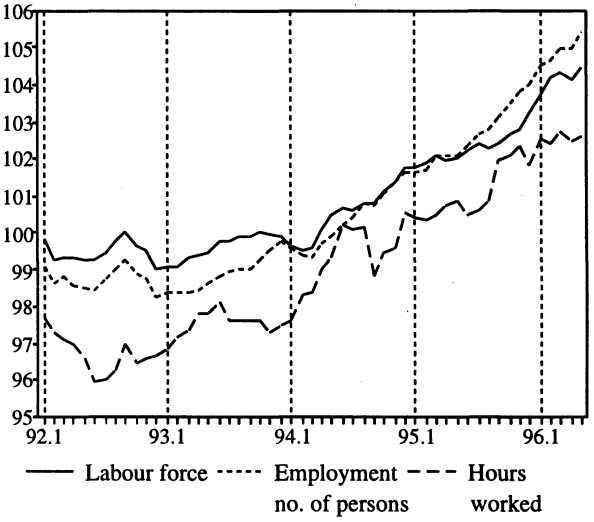
Imports

Seasonally adjusted volume indices, 1992=100

Source: Statistics Norway.

Labour force and employment

1990 = 100. Seasonally adjusted and smoothed



Source: Statistics Norway

Inventory investment was approximately unchanged from the first half of 1995 to the first half of this year. 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 an unreasonably sharp rise in the period 1993-1995, which may indicate that the national accounts figures in this period have to some extent either overestimated the growth in supply or underestimated the growth in demand. This does not appear to be the case for 1996, however.

Traditional merchandise imports (measured in volume) were approximately unchanged between the first and second quarter after a sharp rise in imports of cars contributed to pronounced growth in the previous quarter. So far this year imports of engineering goods have risen at a somewhat slower pace than total traditional merchandise imports, while the reverse was true in 1994 and 1995. Prices of traditional import goods have shown little change over the last few quarters, and in the first half of 1996 were a seasonally adjusted 0.2 per cent above the average for last year. In the same period prices of traditional export goods fell by 1.6 per cent, entailing that the terms of trade in traditional goods showed a moderate deterioration.

According to revised national accounts figures, employment rose by 2.1 per cent last year following a growth of 1.2 per cent the previous year. Figures from Statistics Norway's labour force survey (LFS) show that employment continued to rise briskly in the first half of 1996.

Adjusted for normal seasonal variations and known breaks in the series, employment in the first two quarters of 1996 was 1.7 per cent above the level in the second half of last year. The number of man-hours worked also rose, but not as much as the number of persons employed. As a result of a revision of the LFS from the beginning of the year, there is greater than usual uncertainty attached to the figures on changes. The labour force, which rose at a noticeably slower pace than employment through 1994 and 1995, increased by nearly 1.8 per cent, seasonally adjusted, between the second half of 1995 and first half of 1996. The number of persons unemployed was at about the same level in the first half of this year as in the second half of 1995, adjusted for seasonal variations and known breaks in the time series. However, because the number unemployed measured by the LFS was probably erratically low in the fourth quarter of 1995, there is reason to believe that actual unemployment declined in this period. 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 series has been declining in the period to end-August this year, and is now below the average level for 1990. The average number of new vacancies at employment offices in the first eight months of this year was about 3 per cent higher than the level in the second half of 1995 (seasonally adjusted). The total number of vacancies has declined by 3 per cent in the same period, but there was a slight increase from the second quarter to the period July-August.

The consumer price index rose by 0.9 per cent in the first half of the year compared with the same period one year earlier, while the year-on-year rise in prices in the second half of last year was 2.3 per cent. The fall in the 12-month rise between the first half of 1995 and first half of 1996 is partly related to the one percentage point increase in the VAT rate in January 1995, while no equivalent change was made this year. Moreover, the change in car taxes at the beginning of the year contributed to lower car prices, while low prices for clothing and footwear even following the end of the normal winter seasonal sales period contributed to curbing the year-on-year rise in the consumer price index through the first half of 1996. The elimination of VAT compensation on milk, cheese and meat from 1 July and higher electricity prices, however, pushed up the year-on-year rise in prices to 1.3 per cent in July and 1.5 per cent in August. A continued rise in the average price of electricity for households in the period ahead will probably result in a further increase in price inflation this autumn, which is expected to be 1.4 per cent on an annual basis. This is lower than expected for the ECU area, and below the average for our main trading partners.

Following a growth in wages per normal man-year in the range 3.1-3.4 per cent over the past three years, the results of the wage settlement so far this year indicate stronger wage growth in 1996. With a stronger contribution from wage drift this year than last year, annual wage growth in 1996 is estimated at 4.3 per cent and slightly higher in manufacturing industry. It is natural to view wage growth in manufacturing industry in conjunction with the favourable trend in profitability in the industry over the past few years. Other groups have also reached agreements that will result in a higher increase in wages in 1996 than in the previous three years. With noticeably lower price inflation this year compared with 1995, real wages are set to show a sharp rise.

Financial institutions' interest rates generally shadowed the moderate decline in money market rates through 1995 and in the first two quarters of 1996, and at the end of the second quarter households' average borrowing rate was a good half a percentage point lower than the level one year earlier. The three-month Norwegian euro-rate fell further in the period to mid-May, but has since risen again by about half a percentage point to a level of about 0.8 percentage point above the corresponding ECU rate at the end of August. Up to end-June the Norwegian krone appreciated against the ECU, at the same time that Norges Bank purchased foreign exchange corresponding to about Nkr 31 billion. This indicates that in the first half of 1996 Norges Bank contributed to keeping money market rates at a higher level than balance in the foreign exchange market would imply. Over the past two months, however, the krone has weakened against the ECU and Norges Bank has not bought or sold foreign exchange. This indicates that market participants in this period have demanded a higher interest rate on krone holdings than on corresponding ECU holdings.

The current account of the balance of payments showed a surplus of Nkr 34.4 billion in the first half of 1996, equivalent to a good 7 per cent of GDP, and more than Nkr 18 billion higher than the level in the first half of last year. The sharp rise in the surplus primarily reflects the increase of about Nkr 15 billion in the value of oil and gas exports between the first half of 1995 and first half of 1996. Exports, excluding oil and gas, rose in value by a good Nkr 4 billion, which is on a par with the increase in the value of total imports. The deficit on the interest and transfers balance fell by Nkr 2.7 billion in the same period.

Outlook for the remainder of 1996 and 1997

It now appears that growth in the Norwegian economy will be stronger in 1996 than in 1995. This particularly applies to total GDP due to the vigorous growth in oil and gas production, while mainland GDP growth is likely to be only slightly higher than last year. Whereas through 1995 there was a slowing of growth in both domestic components and exports, developments at the beginning of 1996 were marked by high growth in the private sector in both the mainland economy and in petroleum activities. This has boosted employment and reduced unemployment further, but the labour force has continued to expand at a brisk pace, thereby curbing the decline in unemployment. Our calculations show that unemployment will continue to fall

in the period ahead and stand at about 4 per cent at the end of 1997.

While output growth in Norway was on a par with growth abroad in 1995, developments in 1996 will be markedly different because growth in the OECD area, particularly Europe, is moderate. In spite of the low growth among Norway's trading partners, Norwegian exports of traditional goods have risen substantially, accompanied by a sharp rise in exports of oil and gas. In the absence of a pronounced cyclical upturn in the OECD area, growth in traditional exports will not be as high in the period ahead as at the beginning of 1996. High export growth combined with the unexpectedly high price of crude oil are resulting in a substantial increase in the surplus on both the current account and in government budgets in 1996. This situation is projected to continue in 1997, although there is naturally considerable uncertainty surrounding the price of crude oil.

The rate of inflation has remained subdued for several years. In the first half of 1996 the rise was unusually low, partly reflecting tax reductions and special conditions linked to clothing and footwear prices. At the moment many analysts are concerned about the extent to which the growth in the Norwegian economy and the substantial wage increases that have been negotiated will result in a significantly higher inflation rate in Norway. Our assessment of the situation in the Norwegian economy in the period ahead, which is largely influenced by the results of our macroeconomic models, indicates that the rate of inflation in Norway is not likely to rise substantially. One special factor in Norway is the decline in the production of electricity due to water shortages. This has already contributed to higher electricity prices for many consumers and businesses, and further price increases are expected later this autumn.

The projections presented here for developments in the Norwegian economy in 1996 are virtually identical to those presented in Economic Survey 2/96. The projections for growth in 1997 are also very close to figures published earlier. The slight upward revision in price inflation for 1997 is due to special conditions in the electricity market which we expect will be normalized in 1998 and then contribute to lower inflation rates again.

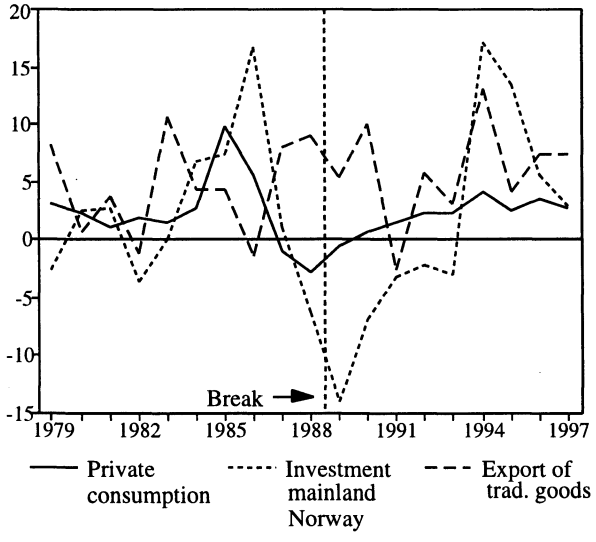
Higher growth in Europe, unchanged in the US

Most forecasts of international economic developments have been based on the assumption that a rise in interest rates in the US would reduce growth there, while a fall in interest rates in Europe and the effect of an upturn in the US from the beginning of 1995 to mid-1996 would boost growth in Europe. Our projections largely coincide with others in Europe's case, while we do not expect any substantial decline in growth in the US. So far the figures do not indicate that this slowdown is imminent and any increase in interest rates in the US is not expected to occur until the end of this year at the earliest. Our projections therefore show higher growth in imports among Norway's traditional trading partners, which will contribute to a further rise in Norwegian exports in 1997. Norway's traditional merchandise exports showed a vigorous growth in the first half of 1996. This is compatible with the hypothesis that developments in Norwegian exports are normally ahead of an international upswing, and implies that in the period ahead we cannot expect growth to be as strong as at the beginning of 1996.

Moderate rise in government expenditure

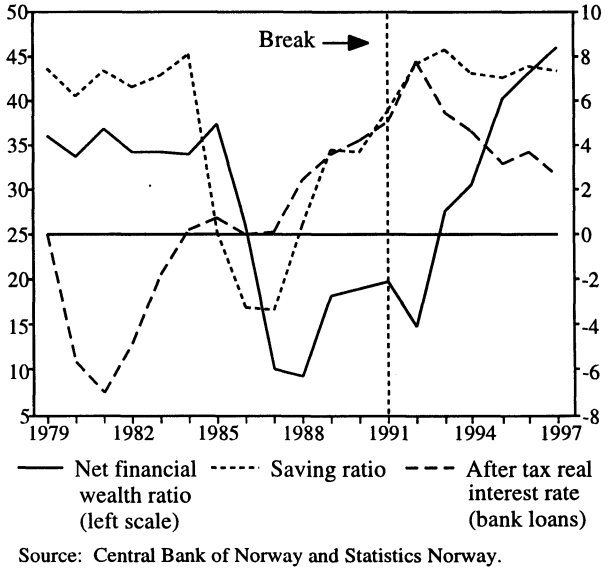
The assumptions concerning fiscal policy are based on the estimates in the Revised National Budget for 1996 and are unchanged from the last Economic Survey. The estimates

Consumption, capital formation and exports 1979 - 1997
Percentage growth. Forecasts for 1996 and 1997



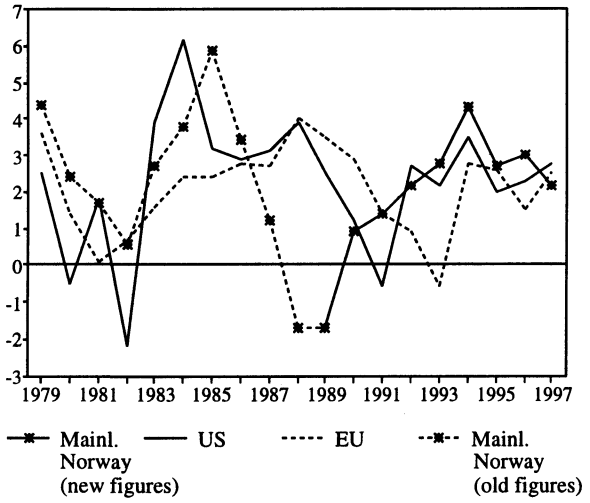
Source: Statistics Norway.

Household financial indicators 1979 - 1997
Per cent. Forecasts for 1996 and 1997



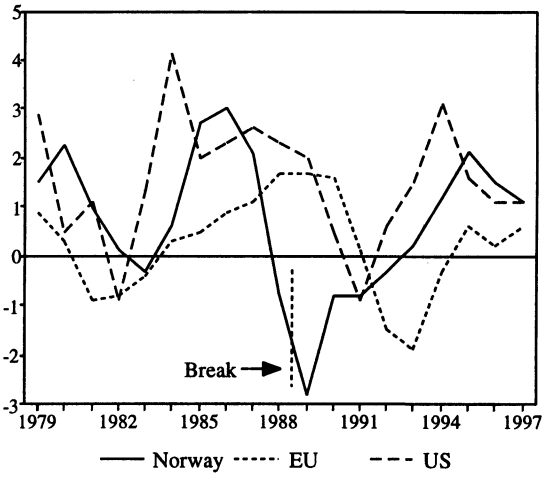
Source: Central Bank of Norway and Statistics Norway.

Gross domestic product 1979 - 1997
Percentage growth. Forecasts for 1996 and 1997



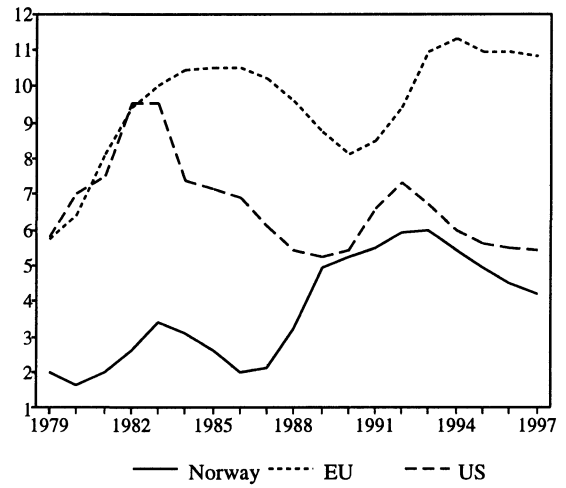
Sources: Statistics Norway, OECD and European Commission.

Employment 1979 - 1997
Percentage growth. Forecasts for 1996 and 1997



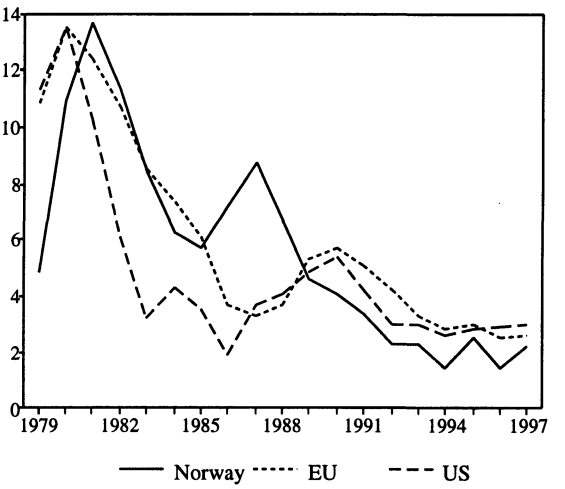
Sources: Statistics Norway, OECD and European Commission.

Unemployment 1979 - 1997
Percent. Forecasts for 1996 and 1997



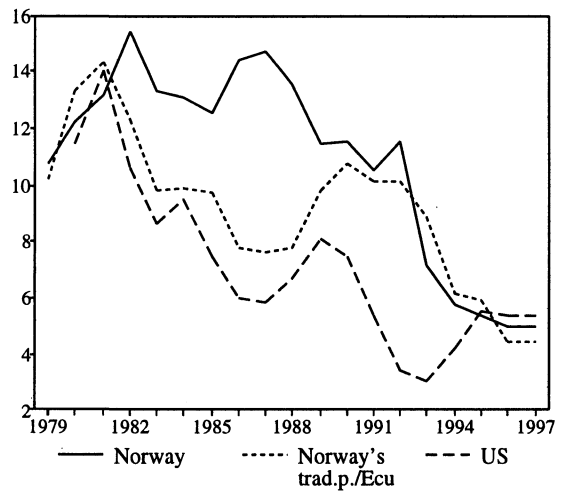
Sources: Statistics Norway, OECD and European Commission.

Consumer prices 1979 - 1997
Percentage growth. Forecasts for 1996 and 1997



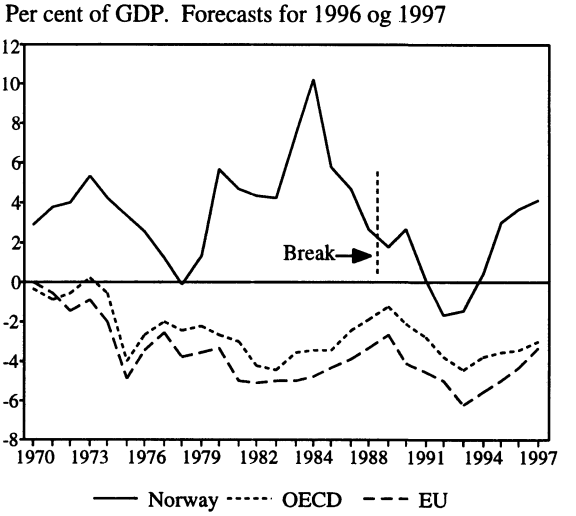
Sources: Statistics Norway, OECD and European Commission.

3 months eurorates 1979 - 1997
Per cent. Forecasts for 1996 and 1997



Sources: Statistics Norway, OECD and European Commission.

General government net lending 1970 - 1997
Per cent of GDP. Forecasts for 1996 og 1997



Source: OECD, European Commission and Statistics Norway.

Main economic indicators
Percentage change from previous year unless otherwise noted

	Accounts 1995	SN 1996	NB[1] 1996	MoF[2] 1996	SN 1997	NB[1] 1997	MoF[2] 1997
Demand and output							
Consumption in households and non-profit organizations	2.6	3.5	4	3.5	2.7	2 3/4	2.1
General government consumption	0.2	1.7	1 3/4	1.7	1.2	1	1.1
Gross fixed investment	4.5	6.9	5 1/2	7.3	1.8	1 3/4	0.9
- mainland Norway	13.5	5.6	7 1/4	8.8	2.9	2 1/4	1.8
- petroleum activities	-13.1	7.6	1	1.3	-1.7	-1	-2.5
Demand from mainland Norway[3]	3.8	3.5	4	-	2.3	2 1/4	-
Change in stocks[4]	1.2	-0.2	-	-0.1	0.0	-	-
Exports	3.8	7.2	8 1/4	7.2	4.8	5	4.4
- crude oil and natural gas	8.4	12.3	15	15.2	2.0	4 1/2	4.4
- traditional goods	4.1	7.4	6 3/4	3.7	7.5	5 3/4	4.6
Imports	5.1	5.8	6	4.8	4.7	4	2.5
- traditional goods	9.1	6.4	7 1/4	5.8	4.1	4	2.4
Gross domestic product	3.3	4.3	4 3/4	4.5	2.3	2 1/2	2.3
- mainland Norway	2.7	3.0	3 1/4	3.0	2.4	2 1/2	2.0
Labour market[5]							
Persons employed	2.1	1.5	1 3/4	1 1/2	1.1	1	1
Unemployment rate (level)	4.9	4.5	4 1/4	4 1/4	4.2	4	-
Prices and wages							
Wages per man-hour	3.3	4.3	4 1/4	3.8	3.6	4 3/4	-
Consumer price index	2.4	1.4	1 1/4	1 1/4	2.2	2 1/2	-
Export prices, traditional goods	7.1	-1.7	-1 1/2	1.4	2.1	2	-
Import prices, traditional goods	0.7	1.1	1	1.8	1.8	1 1/2	-
Balance of payment							
Current balance (bill. NKr)	28.4	52	49	52	60	50	57
Current balance (per cent of GDP)	3.1	5.2	4.9	-	5.8	4.8	-
Memorandum items:							
Money market rate (level)	5.4	5.0	-	-	5.0	-	-
Average borrowing rate (level)[6]	7.8	7.4	-	-	7.4	-	-
Crude oil price Nkr (level)[7]	105.9	126	115	115	126	108	107
International market growth	4.9	4.0	-	7 1/2	6.0	-	-
Importweighted krone exchange rate[8]	-2.5	-0.5	0	-	0	-	-

1) NB: Forecast according to Norges Bank, Penger og kreditt 1996/2.
2) MoF: Ministry of Finance's forecasts. Revised national budget 1996.
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 meassurements, 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.

for 1997 entail unchanged real tax and subsidy rates from 1996 to 1997. Continued moderate growth in general-government consumption and a slower rise in transfers due to lower unemployment will result in moderate growth in government expenditure. For demographic reasons there are now small changes in the number of old-age pensioners, a factor which will also curb growth in government spending and household incomes. The greatest contribution to growth from fiscal policy will come from public sector investment in connection with the school reform (children will start school at the age of 6 instead of 7). Figures for the first half of 1996 show that investment has not yet started to increase to any extent, but this is expected to occur in the second half of the year. The impetus generated by investment is expected to peter out during the second half of 1997.

Reduced growth impetus from petroleum activities in 1997

Petroleum investment is expected to rise by a good 7 per cent from 1995 to 1996 and then edge down in 1997. However, a greater share of demand will be focused on imports in 1996, entailing that the demand impetus for Norwegian suppliers will show less change between 1995 and 1996 than these figures in isolation would indicate. The import share is expected to show less of a change in 1997, but the demand impetus for the Norwegian economy will still be reduced. Oil and gas production has risen sharply the last few quarters. Oil production is not expected to show substantial changes the next few years, while gas production will continue to rise considerably.

Some indicators of "pressure" in the Norwegian economy

Since 1991 growth in the Norwegian economy has been higher than the OECD average, both in terms of the economy as a whole and for mainland Norway. Such high growth rates in Norway have not been seen since the mid-1980s. As was the case then, growth in the mainland economy is now higher than the long-term trend growth, but the upturn in the 1990s started from a considerably lower level in relation to the underlying trend. Figures up to the first half of 1996 indicate that mainland GDP is only now approaching the trend, see figure A.

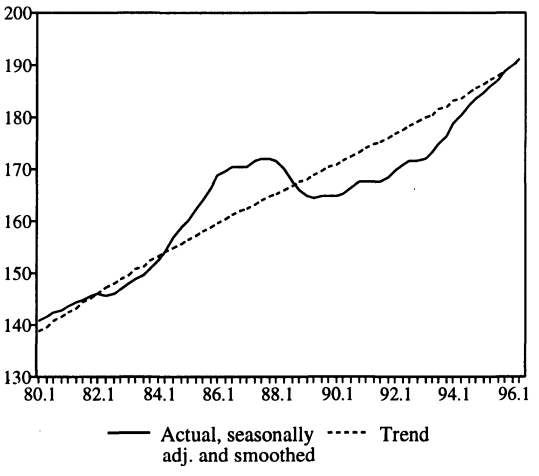
Against this background, it is natural to ask whether the Norwegian economy is now growing too rapidly, in the sense that a shortage of labour, production capacity and other bottlenecks will result in wage and price inflation which over time will lead to an undesirable loss of market shares for Norwegian producers. So far this does not seem to be the case, and our projections show that growth in 1997 will be lower than this year. It is true that average real wages this year are likely to increase more than productivity in the mainland economy and that hourly wage costs in manufacturing may rise faster than among our trading partners. However, this must also be viewed in connection with real wage growth through the period 1989-1995, which was lower than estimated productivity gains in the mainland economy, see figure B.

Analyses of the Norwegian economy carried out by Statistics Norway indicate that the decline in unemployment is not the most important factor behind the rise in wage growth this year. Based on the description of wage formation in manufacturing industry in Statistics Norway's macroeconomic model MODAG, the fall in unemployment from 6 per cent in 1993 to a projected 4.5 per cent this year is estimated to have made a direct contribution of less than half a percentage point to wage growth in manufacturing industry through the period. In the long run a decline in unemployment from 6 to 4 per cent will increase real wages in manufacturing industry by about 1 per cent. As seen in figure C, unemployment must fall below 3 per cent before this has a major impact on wages. Our calculations show that the sharp wage growth in 1996 must primarily be viewed in connection with profitability trends in manufacturing industry, which have brought wage costs as a share of gross factor income down to an historically very low level, see figure D.

The experience of other countries indicates that a persistently high level of unemployment can contribute to reducing flexibility in the labour market as a result of reduced skills and reduced motivation for labour force participation. However, changes during the past few years in the number of vacancies in relation to the sum of registered unemployed and persons participating in ordinary labour market measures so far do not indicate a strong increase in labour market imbalances as a result of the decline in unemployment. When unemployment declined in the mid-1980s, the total number of vacancies increased sharply, whereas vacancies has only slowly drifted upwards during the last three years. So far in 1996 vacancies and unemployment seems to have moved in a more parallel derection, see figure E. Long-term unemployment has also moved on a favourable trend so far during the current upturn. In spite of several years with historically very high unemployment, there were no clear signs of a rise in the share of long-term unemployed when unemployment started to fall in 1993, and over the last few quarters this share has dropped considerably, see figure F. The labour force participation rate rose sharply from 1994 to 1995, but the labour force in per cent of the working-age population will this year, and probably again next year, be below the peak level of 1988, see figure G.

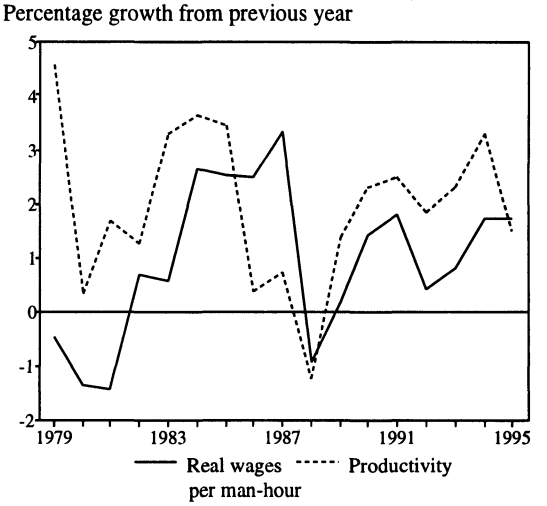
According to Statistics Norway's Cyclical Barometer, the percentage of industrial enterprises reporting that the supply of labour constitutes a limiting factor for production has increased slightly over the past year. The percentage, however, is still small, and considerably lower than in the mid-1980s. During the same period the percentage of industrial enterprises reporting that capacity is limiting production has fallen, see figure H. Moreover, according to the Cyclical Barometer, capacity utilization in manufacturing industry is declining following a marked rise through 1993 and 1994. Since manufacturing output has generally risen throughout the period, it is natural to look upon this development as a result of new production capacity stemming from the vigorous growth in manufacturing investment after 1993.

Fig. A. Mainland GDP, billion 1993-kroner per quarter



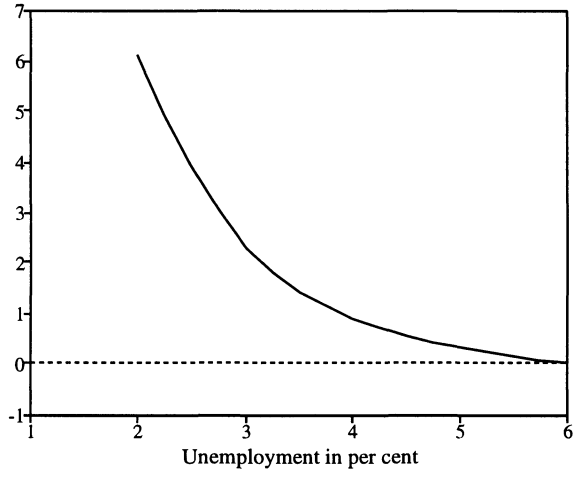
Source: Statistics Norway.

Fig. B. Real wages and productivity in mainland economy
Percentage growth from previous year



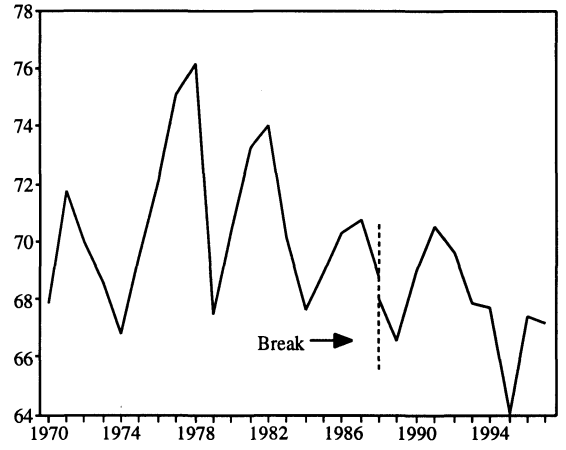
Source: Statistics Norway.

Fig. C. Long-term partial change in manufacturing wages with a decline in unemployment from 6 per cent



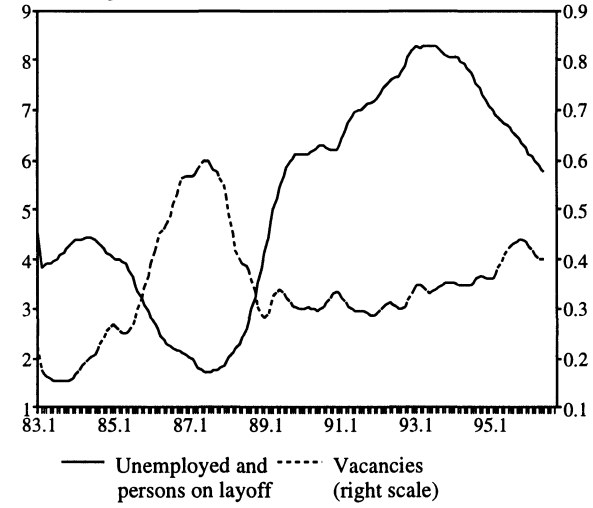
Source: Statistics Norway.

Fig. D. Wage cost as share of gross factor income in manufacturing. Estimates for 1996 -1997.
Per cent



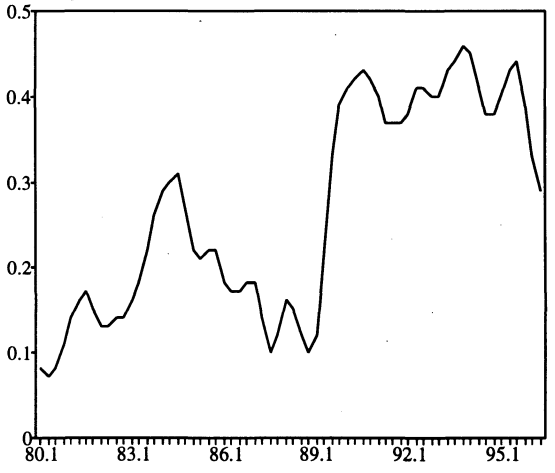
Source: Statistics Norway.

Fig. E. Unemployed persons and vacancies
Percentage of labour force



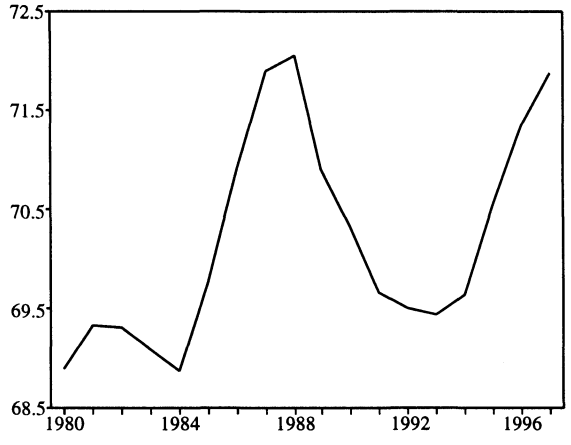
Source: Directorate of Labour and og Statistics Norway.

Fig. F. Long-term unemployment 1980-1996 (LFS)
Percentage of unemployed with known period of unemployment. Smoothed



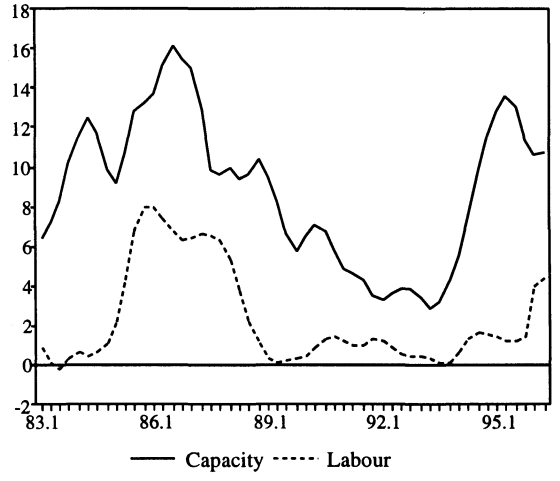
Source: Statistics Norway.

Fig. G. Labour force in per cent of working-age population. Estimates for 1996-1997. Per cent



Source: Statistics Norway.

Fig. H. Factors limiting production for manufacturing
Share of enterprises. Per cent (smoothed)



Source: Statistics Norway, Business survey.

Crude oil prices so far in 1996 have been unexpectedly high. In the last Economic Survey, our projections were based on the assumption that the average price of Norwegian crude oil (which is a little higher than the Brent Blend price) would be Nkr 120 p/b in 1996. In the period to end-August this year the price has been about Nkr 126 p/b. Many observers have been of the view that crude oil prices will fall when Iraq enters the market, but very recent events have again created uncertainty about the future price of oil. Our calculations are based on a crude oil price of Nkr 125 p/b in both 1996 and 1997.

Brisk growth in demand

At the beginning of 1996 household consumption and exports showed particularly high growth. The growth in consumption was primarily reflected in higher purchases of cars, which so far this year have risen by almost 40 per cent. New car registrations for July and August show a continued high level of car purchases. There is reason to believe, however, that purchases may decline slightly through 1997. Growth in other consumption components has been moderate and housing investment has exhibited a more sluggish trend than assumed at the beginning of the year. All in all, household demand has therefore not risen so sharply, and the calculations show that the household savings ratio may edge up from 1995 to 1996. This is very different from developments in the mid-1980s when a substantial share of the growth in purchases was debt financed.

Traditional merchandise exports showed surprisingly high growth at the beginning of the year. Growth has been far more moderate in recent months, but the annual growth between 1995 and 1996 will still be high unless there is a pronounced fall in the second half of the year, which does not seem very likely. Tendencies of higher growth among Norway's European trading partners may contribute to higher growth in exports in 1997. Prices are now falling for a number of important traditional export goods, and manufacturing industry as a whole must expect noticeably weaker profits in 1996 than in 1995.

As noted earlier, both public sector and petroleum investment will make a positive contribution to total demand in 1996, in contrast to the previous year. For 1997, however, these demand components are projected to fall slightly. Private mainland investment, excluding housing, will continue to increase substantially after rising sharply in 1995 as well. The expansion in manufacturing investment will continue, which was expected following high profits in manufacturing sectors for several years and continued output growth. However, lower profits in 1996 are expected to curb growth considerably in 1997. The Gardermoen airport project will generate stronger demand impulses to the Norwegian economy in 1996, but the impetus will be approximately unchanged from 1996 to 1997 and then fall to zero through 1998. Housing investment will continue to fall slightly, but the decline in housing starts may have come to a halt. Approximately unchanged interest rates in 1997 as well as high income growth imply that housing construction may pick up slightly next year.

High output growth in 1996

As a result of higher oil and gas production accompanied by a general growth in demand, total GDP is projected to rise by more than 4 per cent from 1995 to 1996. Mainland GDP growth will be noticeably lower, about 3 per cent. These projections are the same as those presented in the last Economic Survey. The cold and dry winter has resulted in a substantial reduction in the production of electric power, and lower electricity production will reduce total GDP growth by a quarter of a percentage point in 1996. The composition of demand in 1996 will be shifted towards goods with a higher import content, entailing that the growth in imports will be higher than GDP growth. This trend will continue in 1997, albeit at a slightly slower pace. Output growth next year is expected to be appreciably lower than this year. Oil production is projected to remain approximately unchanged from 1996 to 1997, while for mainland Norway the lower growth rate is ascribable to slightly lower growth in demand.

Unemployment will continue to decline

Unemployment has continued to decline through 1996. Changes in Statistics Norway's labour force survey (LFS) entail that unemployment measured by LFS figures is slightly higher than assumed earlier. In order to facilitate comparison with earlier estimates and take into account how unemployment is incorporated in the macroeconomic models, the figures reported are adjusted for changes in the survey. Employment growth will remain buoyant and is particularly strong in terms of the number of persons employed, while the growth in man-hours is now more moderate. However, caution should be exercised in placing too much emphasis on this difference based on developments in one quarter. The labour force is also expected to continue to grow sharply, but the average participation rate in 1996 will still be lower than the level recorded in the previous peak year of 1988. Unemployment in 1996 is still projected at 4.5 per cent (adjusted for the break in the LFS), and we expect unemployment to continue to fall through 1997, albeit at a slower pace.

Prices and wages

As a result of the elimination of VAT compensation on food and higher electricity prices, price inflation rose appreciably from June to July. The uncertainty surrounding price movements during the remainder of 1996 is primarily related to the timing and extent of the rise in electricity prices for households. Higher electricity prices were also embodied in earlier forecasts of price inflation in 1996, but the uncertainty about the magnitude and time profile of price increases remains considerable. We have decided to retain the last estimate of consumer price inflation of 1.4 per cent from 1995 to 1996.

The inflation projection for 1997 has been revised upwards slightly compared with the last Economic Survey, and is now 2.2 per cent. The effects of lower car prices will be eliminated at the beginning of next year, and this alone will push up price inflation by three tenths of a point. The increase in electricity prices through 1996 and the assumption of further increases into 1997 will boost the annual rate of inflation by an additional quarter of a percentage point, in isolation. The projected lower wage growth in 1997 compared with 1996 will have a moderating effect.

No significant new information has been received on wage growth in 1996 since the publication of the last Economic Survey. For the economy as a whole, wage growth is projected at 4.3 per cent, while for manufacturing industry it may be just above 4.5 per cent. Only a small share of the higher wage growth can be ascribed to a generally tighter labour market. A reduction in unemployment from about 5 to 4.5 per cent will boost wage growth from 1995 to 1996 by a couple of tenths of a percentage point, while the effect is a little more than half a percentage point in the long term. A more important factor behind higher wage growth in manufacturing has been brisk productivity gains and improved profitability in this sector in recent years. This will also have an effect on wage developments in the rest of the economy. Slightly lower productivity growth and noticeably weaker profits in manufacturing this year and in 1997 compared with 1995 are expected to have a dampening effect on wage growth in 1997.

Rising and large current-account surplus

The surplus on the current account amounted to a good Nkr 34 billion in the first half of 1996. On an annual basis, a current-account surplus of about Nkr 52 billion is projected, equivalent to a little more than 5 per cent of GDP. Much of the improvement between 1995 and 1996 is ascribable to the increase in crude oil prices, which contributed to an improvement of about 3 per cent in Norway's terms of trade. The terms of trade gain thus explains half of the increase in real disposable income for Norway, which in 1996 is estimated to rise by a good 6 per cent. The current-account surplus is expected to rise further to Nkr 60 billion in 1997. This projection is heavily dependent on movements in oil prices in the period ahead.

Norway: Trends in selected macroeconomic variables
At fixed 1993 prices. Billion Nkr

	Unadjusted		Seasonally adjusted							
	1994	1995	94.3	94.4	95.1	95.2	95.3	95.4	96.1	96.2
Consumption in households and non-profit organizations	428584	439735	107766	108417	107684	109572	111336	111143	113595	113567
Direct purchases abroad by resident households	17286	17298	4494	4305	3964	4350	4610	4375	4189	4341
- Direct purchases in Norway by non-resident households	-15613	-14700	-4071	-3524	-3941	-3603	-3518	-3638	-3625	-3510
General government consumption	180868	181182	45390	45034	45015	45280	45422	45465	45918	46177
Gross fixed capital formation	179759	187837	45395	44068	46747	46931	44990	49169	46619	47945
Oil	52972	46014	12485	11422	10776	10996	11262	12980	10330	11661
Shipping	4826	3373	1099	-296	1681	1595	-1067	1164	813	807
Mainland Norway	121961	138449	31811	32942	34290	34340	34794	35025	35475	35477
Manufacturing and mining	10698	15158	2865	3028	3449	3901	3855	3953	4185	4336
Production of other goods	11250	11731	2743	2809	3041	2937	2802	2903	3003	2829
General government	27706	27562	6935	7104	7115	6857	7102	6488	7224	7076
Dwellings	23526	26510	6178	6530	6777	6706	6539	6488	6334	6303
Other services	48781	57488	13091	13472	13908	13940	14496	15192	14728	14932
Stocks	13506	23997	4986	3213	3276	6427	8503	5796	4054	4380
Gross capital formation	193266	211834	50381	47281	50023	53358	53493	54965	50672	52325
Final domestic use of goods and services	802717	832751	203537	200732	202722	208210	210250	211574	210185	212068
Demand from mainland Norway	731413	759366	184967	186393	186990	189192	191551	191633	194989	195220
Exports	341828	354689	84485	90344	87757	86253	89716	90936	94539	93947
Traditional goods	127108	132372	32887	33673	33827	32036	33485	33197	36842	35923
Crude oil and natural gas	116112	125818	27218	31241	30243	29992	31173	34410	34829	35590
Ships and oil platforms	10416	10954	2398	4182	2043	3031	3720	2136	1934	1570
Services	88191	85544	21982	21247	21644	21194	21338	21194	20935	20864
Total use of goods and services	1144545	1187439	288022	291075	290480	294463	299966	302510	304725	306016
Imports	279766	294127	70651	69998	71229	73931	73529	75439	73976	74594
Traditional goods	184085	200845	47667	47382	48745	50269	50954	51079	52551	52512
Crude oil	943	1244	251	228	349	382	328	185	214	218
Ships and oil platforms	12446	13250	1894	2351	3198	2566	2425	5061	3084	4166
Services	82292	78787	20838	20037	18937	20714	19822	19114	18127	17698
Gross domestic production (GDP)	864780	893312	217371	221077	219251	220532	226437	227071	230749	231422
Mainland Norway	725221	745023	183302	184737	183381	184806	188714	188102	189936	190083
Oil activities and shipping	139559	148290	34069	36340	35870	35726	37724	38970	40813	41339
Mainland industry	651036	666373	164358	165286	164144	165762	168707	167767	169178	169567
Manufacturing and mining	101380	104322	25660	25978	26113	26171	26031	26013	26857	26150
Production of other goods	69487	75588	17481	17909	18562	18859	18708	19404	19277	18069
General government	134578	135321	33759	33814	33408	33611	34010	34294	34226	34479
Private services	345591	351141	87458	87585	86061	87121	89957	88056	88817	90869
Correction items	74185	78649	18944	19451	19237	19044	20007	20335	20758	205106

Norway: Trends in selected macroeconomic variables
Percentage volume change in 1993-prices

	Unadjusted		Seasonally adjusted							
	1994	1995	94.3	94.4	95.1	95.2	95.3	95.4	96.1	96.2
Consumption in households and non-profit organizations	4.1	2.6	1.5	0.6	-0.7	1.8	1.6	-0.2	2.2	-0.0
Direct purchases abroad by resident households	8.6	0.1	2.8	-4.2	-7.9	9.7	6.0	-5.1	-4.2	3.6
- Direct purchases in Norway by non-resident households	13.5	-5.8	0.5	-13.4	11.8	-8.6	-2.4	3.4	-0.4	-3.2
General government consumption	0.7	0.2	0.6	-0.8	-0.0	0.6	0.3	0.1	1.0	0.6
Gross fixed capital formation	6.9	4.5	-2.5	-2.9	6.1	0.4	-4.1	9.3	-5.2	2.8
Oil	-7.3	-13.1	-20.9	-8.5	-5.7	2.0	2.4	15.3	-20.4	12.9
Shipping	-30.5	-30.1	..	..	..	..	..	..	..	..
Mainland Norway	17.2	13.5	8.9	3.6	4.1	0.1	1.3	0.7	1.3	0.0
Manufacturing and mining	8.3	41.7	15.9	5.7	13.9	13.1	-1.2	2.5	5.9	3.6
Production of other goods	2.6	4.3	-7.2	2.4	8.2	-3.4	-4.6	3.6	3.4	-5.8
General government	1.6	-0.5	1.9	2.4	0.2	-3.6	3.6	-8.6	11.3	-2.0
Dwellings	34.9	12.7	9.0	5.7	3.8	-1.1	-2.5	-0.8	-2.4	-0.5
Other services	26.6	17.8	15.8	2.9	3.2	0.2	4.0	4.8	-3.1	1.4
Stocks	40.3	77.7	..	..	..	..	..	..	..	..
Gross capital formation	8.7	9.6	3.4	-6.2	5.8	6.7	0.3	2.8	-7.8	3.3
Final domestic use of goods and services	4.4	3.7	1.8	-1.4	1.0	2.7	1.0	0.6	-0.7	0.9
Demand from mainland Norway	5.2	3.8	2.5	0.8	0.3	1.2	1.2	0.0	1.8	0.1
Exports	8.2	3.8	0.1	6.9	-2.9	-1.7	4.0	1.4	4.0	-0.6
Traditional goods	13.1	4.1	4.6	2.4	0.5	-5.3	4.5	-0.9	11.0	-2.5
Crude oil and natural gas	11.6	8.4	-5.3	14.8	-3.2	-0.8	3.9	10.4	1.2	2.2
Ships and oil platforms	-12.0	5.2	33.1	74.4	-51.2	48.4	22.7	-42.6	-9.4	-18.8
Services	0.2	-3.0	-1.8	-3.3	1.9	-2.1	0.7	-0.7	-1.2	-0.3
Total use of goods and services	5.5	3.7	1.3	1.1	-0.2	1.4	1.9	0.8	0.7	0.4
Imports	6.9	5.1	0.2	-0.9	1.8	3.8	-0.5	2.6	-1.9	0.8
Traditional goods	15.3	9.1	5.9	-0.6	2.9	3.1	1.4	0.2	2.9	-0.1
Crude oil	-17.5	32.0	9.6	-9.2	53.1	9.5	-14.1	-43.7	15.6	1.8
Ships and oil platforms	-33.9	6.5	..	..	..	..	..	..	..	..
Services	0.4	-4.3	-3.1	-3.8	-5.5	9.4	-4.3	-3.6	-5.2	-2.4
Gross domestic production (GDP)	5.0	3.3	1.6	1.7	-0.8	0.6	2.7	0.3	1.6	0.3
Mainland Norway	4.3	2.7	2.4	0.8	-0.7	0.8	2.1	-0.3	1.0	0.1
Oil activities and shipping	8.8	6.3	-2.2	6.7	-1.3	-0.4	5.6	3.3	4.7	1.3
Mainland industry	4.0	2.4	1.8	0.6	-0.7	1.0	1.8	-0.6	0.8	0.2
Manufacturing and mining	5.1	2.9	2.3	1.2	0.5	0.2	-0.5	-0.1	3.2	-2.6
Production of other goods	0.8	8.8	2.8	2.4	3.6	1.6	-0.8	3.7	-0.7	-6.3
General government	1.1	0.6	1.0	0.2	-1.2	0.6	1.2	0.8	-0.2	0.7
Private services	5.4	1.6	1.7	0.1	-1.7	1.2	3.3	-2.1	0.9	2.3
Correction items	7.5	6.0	7.7	2.7	-1.1	-1.0	5.1	1.6	2.1	-1.2

Norway: Price indices for selected macroeconomic variables

		Percentage change from the same periode the previous year				Growth from previous quarter seasonally adjusted. Per cent*)			
	1995	95.3	95.4	96.1	96.2	95.3	95.4	96.1	96.2
Consumption in households and non-profit organizations	2.5	2.2	2.5	0.6	1.7	0.6	0.6	-0.3	1.0
General government consumption	3.5	3.2	3.1	3.1	3.5	0.7	1.0	1.2	0.5
Gross fixed capital formation	3.1	3.6	3.2	3.1	0.9	1.0	0.2	0.9	-1.1
- mainland Norway	3.0	3.1	3.5	3.0	1.8	-0.2	1.5	0.3	0.2
Final domestic use of goods and services	2.7	2.4	2.9	1.6	1.8	1.7	0.3	-0.1	-0.0
-demand from mainland Norway	2.8	2.6	2.9	1.6	2.1	0.5	0.8	0.1	0.7
Exports	2.2	-0.4	0.4	1.0	4.0	2.6	0.9	2.7	3.0
- traditional merchandise exports	7.1	6.0	3.8	-3.1	-1.0	-0.3	-0.2	-1.3	0.7
Total use of goods and services	2.5	1.6	2.2	1.4	2.4	0.4	0.5	0.7	0.9
Imports	0.9	0.9	0.8	0.5	0.4	0.7	0.3	0.2	-0.7
- traditional merchandise imports	0.7	0.4	0.4	0.4	0.0	-0.2	0.3	0.1	0.1
Gross domestic product (GDP)	3.1	1.8	2.6	1.7	3.0	0.3	0.5	0.8	1.4
- mainland Norway	4.2	3.6	3.9	1.0	2.0	1.3	0.5	-0.5	0.9

*) 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

June

6. Kværner's subsidiary Trafalgar House signs a letter of intent with Saudi Iron Steel Company for the construction of a metallurgical factory. The contract is worth $ 165 million. Another company owned by Kværner, Tampella Power, will supply two boilers for a pulp factory in Sumatra, Indonesia. This contract is worth Nkr 450 million.

6. Grønn skattekommisjon (The Green Tax Commission) presents its report. The majority in the Commission advocate that the CO_2 tax be differentiated according to carbon content of the various fuels. The Commission also recommends equal treatment of the petrol and autodiesel tax, the introduction of an autodiesel tax on buses and the introduction of taxes on gas used in vehicles.

8. Kongsberg Gruppen ASA signs a provisional contract, worth Nkr 145 million, to develop sea missiles for the Norwegian Navy. The contract for the entire development phase is expected to be concluded in 1996 and is worth Nkr 1.2 billion for the Kongsberg Group.

9. Iceland, Russia and Norway break off negotiations on uncontrolled fishing in the "loophole" area without setting a date for a new meeting. Norway and Russia are of the view that the Icelanders are not flexible enough and blame them for the collapse of negotiations.

10. The National Union of Electricians and Power Station Workers (NEKF) designates 1 300 of its members to go on strike because the employer's organization, the Norwegian Federation of Electrical Contractors (NELFO) will not accept the demand for paid further education.

11. Veidekke AS is awarded a contract by the Norwegian State Railways to build a new 7-kilometre double track between Såstad and Haug in the eastern part of Norway. The contract is worth Nkr 145 million.

15. Kværner Fjellstrand will supply six fast catamarans to the Turkish shipping company IDO in Istanbul. The contract is worth Nkr 170 million.

15. 286 lift fitters are designated to go on strike. The lift fitters demand that the so-called lift agreement shall continue to apply for lift instalment and maintenance in companies that are members of the Confederation of Norwegian Business and Industry.

19. Kværner Energy will deliver six water power turbines to the Bakun project in Malaysia for altogether Nkr 850 million.

19. Raufoss Automotive is awarded a contract from the BMW car factory. The contract is for six years and is worth Nkr 300 million.

21. Spars International Inc., which is owned 50-50 by Aker and the US company McDermott, is awarded a contract by Chevron, worth Nkr 2 billion, for supplying a platform to an oil field in the Gulf of Mexico.

24. NELFO, the employer's organization, responds to the striking electricians in the National Union of Electricians and Power Station Workers with a lockout in the entire industry, except for those working offshore (see 10 June). More than 8 000 electricians are affected by the conflict.

25. Ulstein Verft signs a contract to build an anchor handling vessel for Solstad Shipping. The contract has a net value of Nkr 220 million.

27. Statoil and its partners that are exploring for oil and gas in the Kazakhstan sector of the Caspian Sea announce discoveries of oil reserves of at least 10 billion tons and gas reserves of 2 000 billion cu.m. The figures are considerably higher than assumed earlier.

28. ABB Offshore Technology wins contracts, including options, with Statoil for Nkr 720 million for Troll Gas and the Sleipner field. The contracts relate to maintenance and minor modifications.

29. Orkla invests between Nkr 150 and 200 million in a new pizza factory in Stranda. The factory will provide 50 new jobs in addition to those working in the existing pizza factory.

July

3. Statoil signs contracts with the drilling service companies Service Dowell Schlumberger and Baker Huges for Nkr 1.3 billion. The contracts relate to field information and exploration activity.

3. Kværner Masa Yards in Finland will build two fast-moving passenger and cargo vessels for the Greek shipping company Attica Enterprise. The contract is worth Nkr 1.3 billion.

4. Kværner Pulping signs a contract with Advanced Agro Public Company in Thailand worth SKr 1 billion. The contract relates to the delivery of a complete fibre line and recovery plant for a paper mill.

5. Norges Bank decides to introduce a repo arrangement for government bonds and Treasury bills to supply liquidity to the money market. The transactions will be in the form of a sales and repurchase agreement and entail that Norges Bank will enter into an agreement to repurchase the securities sold at the end of the agreement period.

5. The Gas Negotiations Committee and Ruhrgas sign an agreement on deliveries of an additional 60 billion cu.m. of natural gas for between Nkr 35 and 40 billion. The deliveries will take place from 2000 to 2025. This entails that half of Norway's total gas deliveries will go to Germany in 2010.

12. Coflexip Stena Offshore is awarded a contract by the operator Norsk Hydro for supplies to the Visund platform. The contract is worth Nkr 500 million.

13. Kværner Oilfield Products is awarded a contract, worth Nkr 200 million, for supplying subsea production equipment to the Troll project.

20. Kværner wins a contract worth Nkr 130 million for engineering work, procurement and construction management for Western Route Pipeline Project in Azerbaijan.

25. Umoe Sterkoder in Kristiansand misses out on orders worth Nkr 750 million when Statoil shelves its plans to build the Swath ship which was to be leased by Smedvig for drilling services. Experiments in the model tank show that Swath as a design is not suitable for installation and maintenance of wells. As a result, the development of the Åsgard field will be Nkr 200 million more expensive than first assumed.

August

1. Kværner Davy wins a contract, worth $ 160 million, for delivering a steel mill to Saudi Arabia. The contract relates to the delivery of a steel mill for direct production from molten to semi-manufactured steel.

2. The employer's organization, NELFO, and the National Union of Electricians and Power Station Workers, which have been in conflict since 10 June, reach a negotiated solution. The conflict is called off with immediate effect, but the proposal will be voted on later.

7. The newspapers Adresseavisen and Verdens Gang (VG) sign a contract entailing that a large number of copies of VG will continue to be printed in Trondheim. The agreement will extend to 2014 and has a value of Nkr 700 million.

15. The Government decides to reject UNI Storebrand's application for dispensation allowing the company to own 40 per cent of Røde Kors Klinikk AS. UNI wanted to use the clinic as a facility for injured policy-holders with the aim of swifter rehabilitation.

20. Kværner Kleven Leirvik is awarded a contract to build a platform supply ship for Nkr 135 million. The ship was ordered by Remøy Sea Group.

21. At a meeting with the EU Commission, representatives of the Ministry of Fisheries and Ministry of Foreign Affairs repudiate assertions that the Norwegian salmon industry is subsidized. Scottish salmon farmers have accused their Norwegian colleagues of having sold salmon at less than the production price and that the Norwegian authorities subsidize the industry.

23. The strike among 286 lift fitters (see 15 June) is called off when the lift fitters gain acceptance for their demands.

24. Norges Gruppen AS and Astor Grossistene AS sign a large purchasing agreement with the Norwegian Hotel and Restaurant Association and the Association for Hotels and Service Industries. The agreement is for three years and is worth between Nkr 900 million and Nkr 1.2 billion.

27. The Norwegian Industrial and Regional Development Fund turns down an application for financing from Rena Karton. The operating company for the factory, which was wound up in March this year, applied for an investment grant and loan of Nkr 18 and 22 billion, respectively.

28. Aker Olje- og Gassteknologi ASA buys 70 per cent of the British company McNulty Offshore Services in order to strengthen its position for floating production facilities in the British market.

28. Kværner Oilfield Product signs a contract with Kongsberg Offshore, worth Nkr 320 million, for supplying a subsea steel pipe cable. The contract is the world's largest in terms of value in this area and also contains options for future deliveries to the Gullfaks and Midgard field.

28. Just two working days after the last strike was called off, lift fitters are on strike again. The disagreement relates to whether the agreement text shall be included in the main agreement on lift installation and maintenance or whether it will be a local agreement alongside the main agreement.

28. The 130 employees at Rena Karton are given dismissal notices (see 27 August).

29. Statkraft buys shares for an additional Nkr 2.8 billion in the Swedish Sydkraft and becomes the second largest owner. The purchase will strengthen Statkraft's position in the North European energy market, but is controversial because Sydkraft uses nuclear power to generate electricity.

29. The Ministry of Industry and Energy decides to allow Rena Kartonfabrikk to send a new application to the Norwegian Industrial and Regional Development Fund for loans and grants (see 27 August). The Ministry demands detailed information concerning who will own and operate the factory.

30. Statoil signs a framework agreement with Kongsberg Offshore for deliveries of measurement systems for oil and gas production and transport. The agreement is initially for three years, but can be extended by an additional two years. In such an event the contract will be worth Nkr 300 million.

31. Ulstein Verft signs a contract with Swire Pacific Offshore in Singapore to build an anchor handling vessel. The contract is worth Nkr 150 million.

31. Kværner Mandal wins a large contract to build new MTBs for the Defence. The company will first produce a prototype for Nkr 235 million, and then seven more of the same type. There are possibilities that Kværner will produce additional MTBs at a later stage.

Distributional efficiency of different types of direct taxation - an analysis of "child relevant"schemes

Jørgen Aasness, Iulie Aslaksen, and Hanne A.Gravningsmyhr

Different types of taxes, income and tax deductions, and transfers are ranked according to their distributional efficiency, i.e. the effect of changing a tax or transfer rate on the distributional measure per billion kroner government budget surplus. The effect on the distribution of the standard of living over all persons and all children in Norway is measured. Real disposible income per consumption unit is used as indicator for the standard of living. With a contractionary policy a better distributional efficiency is attained by increasing taxes as compared to reducing transfers. The results are somewhat sensitive to the choice of distributional measure, and in the reference case the following ranking of the policy means shows their distributional efficiency in a situation of budget cuts: (i) increase tax on gross income, (ii) increase income tax, (iii) increase wealth tax, (iv) reduce parents' income deduction, (v) reduce child benefit for the first child, (vi) reduce parents' tax deduction, and (vii) reduce child benefit for families with three or more children. The latter policy proposal clearly has the lowest distributional efficiency, and this conclusion is robust with regard to choice of inequality measure and model specifications in our analysis

Introduction

The tax system influences the average standard of living for various population groups, as well as the inequality of the standard of living. Recently, the standard of living for children has been in the focus of political debate. The standard of living and welfare of children are closely linked to the economic situation of their families, although other factors also play a large role. Thus it is important to investigate the effects of various policy means, like tax policies, on the economic situation of families with children.

In this article we focus on distributional effects of changes in child relevant taxes and transfers, i. e. taxes and transfers that are particularly important for families with children. These inlude child benefit, parents' income deduction (in labor income) and parents' tax deduction. In addition, income tax and wealth tax obviously influence the economic situation for families with children. Specifically we consider a situation where government aims at increasing the budget surplus by one billion kroner compared to the reference case and considers alternative policies, such as tax increase or reductions in transfers or deductions. We analyze the distributional effects of these proposed policies.

In practice, we calculate the revenue effects and distributional effects of the alternative policies, and subsequently we calculate the distributional effect per billion kroner budget improvement, simply by dividing the distributional effect by the revenue effect (budget improvement). The resulting ratio is denoted the *distributinal efficiency* of the policy means. We assume that the distributional efficiency is fairly constant with respect to the size of the change, and some simulation experiments supported this hypothesis in our setting.

We calculate the effect of seven different budget cut proposals on the distribution of standard of living over all persons and over all children in Norway. Three aggregated measures are applied: average standard of living, measured by real disposable income per consumption unit, the Gini coefficient, that measures inequality in income distribution of standard og living, and a combination of these two measures denoted Sen-welfare.

The model framework

The calculations are obtained by the model LOTTE-KONSUM (LOTTE-Consumption) developed in Statistics Norway, see Aasness (1993, 1995). This model is part of the model framework LOTTE, a microsimulation model for taxes and social security, see Aasness et al. (1995). LOTTE-KONSUM is based on consumer theory and econometric analysis of the standard of living, as well as welfare theory for aggregating the standard of living over households and persons to population totals. In addition to analyzing distributional effects of taxes, transfers and other factors influencing household income, the model traces the effect of indirect taxes and other factors influencing consumer prices. The model calculations presented in this article are extensions and further elaborations of a previous study of distributional efficiency of child benefit versus indirect tax of food (Aasness (1993)). In the present calculations, however, indirect taxes and consumer prices are considered as given.

Each policy means is analyzed with regard to the level and the distribution of the (material) standard of living. As indicator for the standard of living for each person in a household we use real disposible household income per consumption unit. This implies that all persons in a household are assumed to have the same standard of living, a simplifi-

cation that we accept in the absence of specific information on internal distribution in the household. Households are considered as institutions that produce a standard of living for their members. We take into account economies of scale in household production, which implies that the number of consumption units in the household is smaller than the number of persons. For example two adults sharing household need less than twice the income of a single person to obtain the same standard of living - as they need less than twice the size of the house, and other expenditures like electricity may be shared. Moreover, children need less food than adults. This is reflected in the model by the increase in number of consumptions units being lower for an additional child than for an additional adult.

The choice of equivalence scale is a controversial and unresolved issue.There are as yet no empirical results that have found unanimous acceptance by the research community, and a number of different equivalence scales and estimation methods are currently in use. Our main choice is the so-called OECD-scale (in the model base year 1992). This means that if the cost of living for a single person is normalized to 1, then the cost of obtaining the same standard of living for an additional adult in the household is 0.7, and for an additional child it is 0.5. (In our model this applies to all levels of standard of living in the base year, but the equivalence scale is price dependent, and via price changes also dependent on the standard of living, for other years than the base year. However, the OECD-scale is a good approximation to the equivalence scales of the model in the simulation year 1994).

Several empirical studies of Norwegian consumer expenditure surveys support the hypothesis that the OECD - scale is a suitable approximation, see Bojer (1977, p.88), Herigstad (1979), and Røed Larsen and Aasness (1996, table 2). But sceptics may counter this hypothesis, and we have therefore carried out sensitivity analysis for our results within a simple, but continuous class of equivalence scales as described in Aasness (1993, 1995). The class contains one parameter e, which can be interpreted as the cost of living for a child relative to a single person. This parameter may also be interpreted as describing the economies of scale in household production.The larger e is, the smaller is the economies of scale, and the larger is the cost of an additional child. If e equals zero, economies of scale are perfect, i. e. additional family members do not incur additional costs, and the standard of living for each household member is measured by total household income. If e equals one, there are no economies of scale, and the standard of living for each household member is measured by household income divided by the number of household members. If e equals 0.5, this corresponds to the OECD-scale. In Section 3 we apply the OECD-scale, while we in Section 4 carry out sensitivity analysis with e ranging from zero to one. (See Buhman et al (1988) for discussion and application of a similar class of equivalence scales.)

The distribution of the standard of living over the population may be described in several ways. In this article we have chosen to focus on three simple aggregate measures: (i) average standard of living, (ii) the Gini coefficient and (iii) Sen-welfare. The Gini coefficient is the most widely applied inequality measure, see Aaberge (1993) for an axiomatic foundation. The Gini coefficient is an inequality measure that varies between zero and one, and its value increases with the degree of inequality in the distribution. Sen-welfare combines the two previous measures by multiplying one minus the Gini coefficient by average standard of living. Sen (1974) gives an axiomatic foundation for this welfare measure. We analyze the distribution over all persons in Norway, and also over all children in Norway. In many contexts, child is the relevant unit of analysis, especially in studies which focus on the standard of living of children.

Note that the model does not take into account behaviour responses on say labor supply. The focus is on first order effects of changes in tax rates on disposable income and standard of living.

Results

We will analyze distributional effects of alternative policy proposals to improve the government budget. Seven alternative policies are considered, see Table 1, of this three types of tax increases, two types of child benefit reductions and two types of deductions for child related costs. The effects are calculated per billion kroner revenue, and may thus be interpreted as marginal changes that are comparable accross types of policy.

Tax on gross income is a progressive tax on high incomes, and is levied on personal income without any deductions. In our simulation the rate is increased by one percentage point. *Income tax* is analyzed in terms of the common tax to the tax distribution fund, which has a flat tax rate and is proportional to net income less income deductions, if appliccable. In our simulation the rate is increased by one percentage point. *Wealth tax* to central government is levied on net wealth and is progressive. In our simulation the rate is increased by one percentage point.

Parents' income deduction is a deduction depending on net labor income. This deduction is given to parents or other providers that are unable to care for the child during the day, due to paid labor, education, disability, etc. The deduction may be given as a standard deduction or as a deduction for actual expenses if these exceed the standard deduction. In our simulation the maximum parents' income deduction is reduced by 10 percent of initial value.

Parents' tax deduction is a deduction in total tax given to parents or other providers for children and youth under the age of 19. If the recipient does not have taxable income, the tax deduction is given as a transfer payment. In our simulation the deduction is reduced by 10 percent of its initial value.

Child benefit is for historic reasons calculated as a negative tax. It is given to all who supports children under the age of 16 and who resides in this country. Single parents are eligible for an extra child benefit. The child benefit is higher for the second child than for the first, and the rate increases with the number of children up to five. An additional benefit is given for children under the age of three. In this article two alternatives are analyzed. First, the child benefit is reduced for the first child (but additional child benefit for small children is retained). Secondly, the child benefit is reduced for the third child and more.

The model results in Table 1 show that *a budget improving policy in the form of tax increases has a better distributional efficiency than reducing child benefit or reducing deductions for child related expenses.* This applies to all three distributional measures; average standard of living, Gini coefficient and Sen-welfare. The conclusion is quantitatively strengthened if the unit of analysis is *child* rather than *person*, as illustrated in Table 2.

Percentage change in Sen-welfare and average standard of living is negative for all the policy proposals. A budget improving policy (higher revenue) implies that money flows from the private sector as higher taxes or reduced transfers, and this leads to a decline in standard of living, measured as real disposable income per consumption unit.

With child as the unit of analysis, Table 2 shows that among the tax policies, the wealth tax has the highest distributional efficiency, reflecting the fact that families with children have little net wealth.

Among the child relevant transfers and deductions, a reduction in the child benefit for families with three or more children has the least distributional efficiency, regardless of choice of inequality measure. Especially with child as the unit of analysis, this policy proposal leads to a large increase in inequality in the distribution of standard of living. The quantitative differences are sufficiently large to substantiate the robustness of the ranking of child benefit for three or more children. The ranking of the other transfers and deductions, however, depends on the choice of inequality measure, and the quantitative effects are smaller as compared to the results for child benefit for families with three or more children.

The change in average standard of living per person is fairly constant with respect to choice of policy instruments. Percentage change in Sen-welfare from a reduction in child benefit for families with three or more children is -0.53 for the whole population (Table 1), but - 1.51 when the focus is on children (Table 2). It is no surprise that the effect of child relevant taxes and transfers is stronger for children than for the population as a whole, but the large quantitative differences precisely illustrate the need to pay particular attention to the standard of living of *children* in addition to the general analysis of income distribution in the population.

Table 1. Distributional efficiency of an increase in various taxes and a reduction in child benefit and various deductions. All persons. OECD equivalence scale. Ranking number in parentheses

	Percentage change in Sen-welfare per billion kroner change in revenue	Percentage change in standard of living per billion kroner change in revenue	Percentage change in Gini coefficient per billion kroner change in revenue
Increased tax on gross income	-0.109 (1)	-0.24 (2)	-0.450 (1)
Increased income tax	-0.186 (2)	-0.24 (2)	-0.180 (2)
Increased wealth tax	-0.229 (3)	-0.22 (1)	0.016 (3)
Reduced income deduction	-0.316 (4)	-0.27 (4)	0.145 (4)
Reduced child benfit for 1. child	-0.386 (5)	-0.27 (4)	0.387 (5)
Reduced tax deduction	-0.403 (6)	-0.28 (6)	0.421 (6)
Reduced child benefit for 3. child+	-0.531 (7)	-0.29 (7)	0.792 (7)

Table 2. Distributional efficiency of an increase in various taxes and a reduction in child benefit and various deductions. All children. OECD equivalence scale. Ranking number in parentheses

	Percentage change in Sen-welfare per billion kroner change in revenue	Percentage change in standard of living per billion kroner change in revenue	Percentage change in Gini coefficient per billion kroner change in revenue
Increased wealth tax	-0.074 (1)	-0.089 (1)	-0.061 (4)
Increased income tax	-0.128 (2)	-0.267 (3)	-0.584 (1)
Increased tax on gross income	-0.183 (3)	-0.225 (2)	-0.177 (2)
Reduced income deduction	-0.642 (4)	-0.663 (6)	-0.087 (3)
Reduced child benefit for 1. child	-0.777 (5)	-0.631 (4)	0.632 (5)
Reduced tax deduction	-0.847 (6)	-0.650 (5)	0.824 (6)
Reduced child benefit for 3. child+	-1.510 (7)	-0.940 (7)	2.421 (7)

Increased tax on gross income or increased income tax will reduce inequality in the population, whereas reduced child benefit and reduced parents' income and tax deductions will increase inequality. On the other hand, looking at distribution among children shows that reduced parents' tax deduction will reduce inequality among children. This is a reasonable results, as this deduction is given to parents who do not care for the child during the day, i.e. mostly families with two incomes, that have high money income compared to the families that produce daytime child care in the household and thus have lower money income.

Sensitivity analysis

In this section we analyse how sensitive the results are with regard to choice of equivalence scale (in the base year), within the simple, but continuous class of equivalence scales previously discussed, where the parameter e may be interpreted both as the relative cost of living for a child and as a parameter of economies of scale in household production. In Tables 1 and 2 the OECD-scale is applied, corresponding to $e = 0.5$. In this section we investigate how the choice of equivalence scale (e) influences the ranking of the various policy proposals.

Figure 1 shows percentage change in the standard of living per billion kroner change in revenue for wealth tax, income tax and tax on gross income, while Figure 2 shows the same for the two alternatives for child benefit and parents' income and tax deduction. Note that the rationale for considering change in the standard of living per billion kroner change in revenue is the use of equivalence scales and the underlying assumption of household economies of scale. Without adjusting for consumption units, a billion kroner in tax reduction equals a billion kroner in increased income. This is clearly seen in Figures 1 and 2 for $e = 1$, where the change in the standard of living is the same for all policy proposals.

Figures 1 and 2 show that the ranking of the policy means from Table 1 is preserved for all values of e, i.e. for the whole class of equivalence scales under consideration. The ranking is robust, but the absolute differences between the various instruments with regard to effect on the average standard of living increase with the degree of household economies of scale. (i.e. the smaller is e). This reflects that the more efficient families with children are in the production of material welfare, the larger is the loss incurred by a given income reduction. Reducing child benefit for large families leads to the largest reduction in average standard of living, whereas an increase in wealth tax leads to the smallest reduction in average standard ov living, and this holds for all levels of e.

Figure 3 shows the distributional efficiency measured as percentage change in the Gini coefficient per billion kroner change in revenue for wealth tax, income tax and tax on gross income, whereas Figure 4 shows the same for the two alternatives for child benefit and parents' income and tax deductions. Again it is seen that the ranking of the alternatives on the whole is robust. In particular, child benefit for three and more children is the most distributional efficient policy means, regardless of value of e. A reduction of this form of child benefit has the lowest distributional efficiency. The quantitative difference between the policy alternatives varies considerably with the value of the relative cost of living for a child (e).

Reduction in the child benefit for the first child increases inequality. In this respect the current policy of giving child benefit for the first child has an equalizing effect. This holds regardless of the value of e, but the effect on inequality is larger the larger e is. This seems reasonable, the larger is e, the lower is the standard of living for families with children, and the more efficient is the child benefit as a means for equalizing income. Reducing the child benefit for the first child almost corresponds to a flat tax on all families with children. Parents' tax deduction also is a constant amount, and we see that these two alternatives almost have identical effects. Changing the child benefit for families with three or more children has the largest effect on the Gini coefficient and is the most distributionally efficient policy alternative. The effect on inequality of the various child relevant policies is larger the larger e is, except for very high levels of e, where the effect of the the various policies differs considerably. Reducing the child benefit, in both alternatives, increases inequality, and this holds for all levels of e.

Figure 5 shows pecentage change in Sen-welfare per billion kroner change in revenue for income tax, wealth tax and tax on gross income, whereas Figure 6 shows the same for the two alternatives for child benefit and parents' income and tax deductions. The results are fairly insensitive to the choice of equivalence scale, both with regard to ranking of the alternarives and the size of the effects. Only the effect of changes in parents' income deduction depends somewhat on e.

We may thus conclude that the choice of equivalence scale may influence the size of the distributional efficiency of the various policy alternatives, but hardly their relative ranking. This provides an important additional information in the evaluation of different policy proposals. The more robust the results are with respect to choice of equivalence scale, the more reassurance may be held by policy makers that the desired result may be obtained.

Conclusions

We have found large differences between the policy proposals for budget improvements in their effect on average standard of living, inequality measured by the Gini coefficient, and Sen-welfare. Increases in tax on gross income, income tax and wealth tax have least effect on average standard of living, inequality and Sen-welfare, whereas reduction in child benefit for families with three or more children, and the parents' tax deduction, have the largest effects. Focusing on the standard of living for children, the effects of the child relevant policy instruments are larger

Figure 1. Percentage change in average standard of living per billion kroner change in revenue from increase in various types of direct taxes

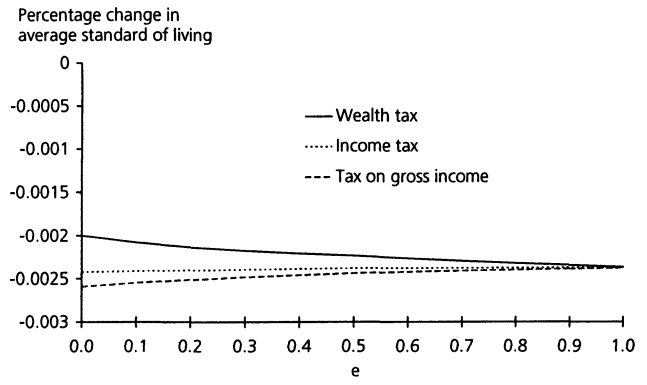
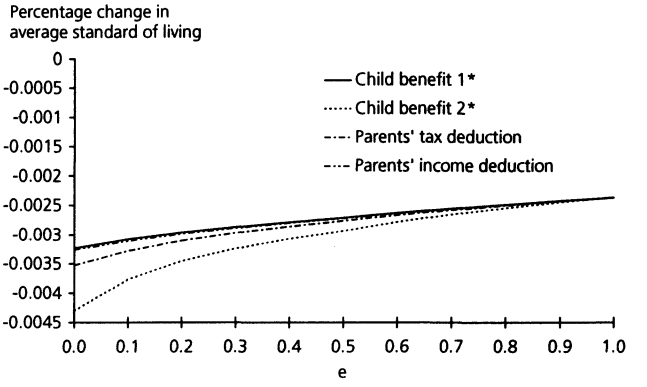


Figure 2. Percentage change in average standard of living per billion kroner in revenue from reduction in various types of deductions and transfers



* Child benefit 1 denotes reduced child benefit for the first child, and child benefit 2 denotes reduced child benefit for three or more children.

Figure 3. Percentage change in Gini coefficient per billion kroner change in revenue from increase in various types of direct taxes

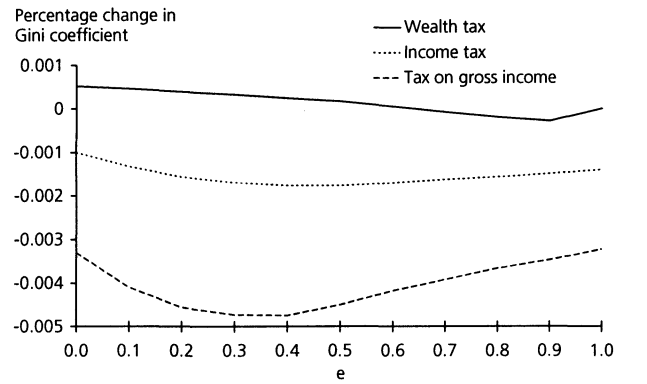
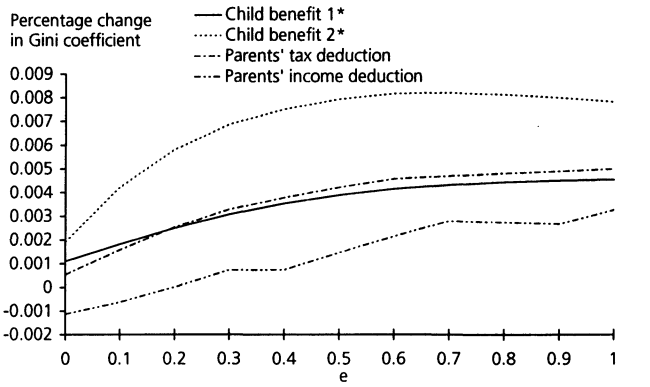


Figure 4. Percentage change in Gini coefficient per billion kroner change in revenue from reduction in various types of deductions and transfers



* Child benefit 1 denotes reduced child benefit for the first child, and child benefit 2 denotes reduced child benefit for three or more children.

Figure 5. Percentage change in Sen-welfare per billion kroner change in revenue from increase in various types of direct taxes

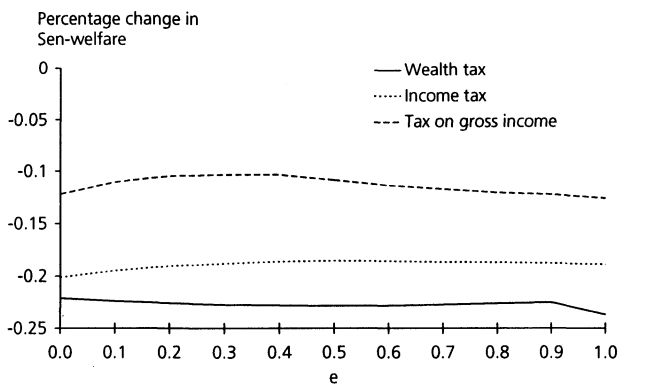
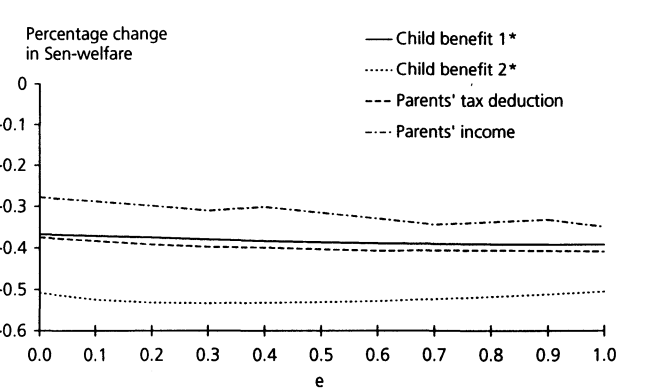


Figure 6. Percentage change in Sen-welfare per billion kroner change in revenue from reduction in various types of deductions and transfers



* Child benefit 1 denotes reduced child benefit for the first child, and child benefit 2 denotes reduced child benefit for three or more children.

than for the whole population. The analysis is partial in the sense that the effect on pre-tax income and standard of living is disregarded. The results are to some extent dependent on the choice of equivalence scale, but the qualitative results are fairly robust. A further extension of this analysis is to consider the distributional efficiency of indirect taxes on goods that weigh heavily in the expenditures for families with children.

References

Aaberge, R. (1993): Theoretical foundations of Lorenz curve orderings, Discussion Paper 88, Statistics Norway.

Aasness, J. (1993): Fordelingsvirkninger av barnetrygd og matmoms - en analyse basert på LOTTE-KONSUM (Distributional effects of child benefit and food subsidies - an analysis based on LOTTE-KONSUM), *Økonomiske analyser* 8/93, 80-88. Statistics Norway.

Aasness, J. (1995): A microsimulation model of consumer behavior for tax analyses, Paper presented at the Nordic seminar on microsimulation models, Oslo, May 1995.

Aasness, J., E. Fjærli, H.A. Gravningsmyhr, A.M.K. Holmøy and B. Lian (1995): The Norwegian microsumulation model LOTTE: Applications to personal and corporate taxes and social security benefits, Cambridge University DAE Working papers MU9504.

Bojer, H. (1977): The effects on consumption of household size and composition, *European Economic Review*, 9, 169-193.

Buhman, B., L. Rainwater, G. Schmaus and T. M. Smeding (1988): Equivalence scales, well-being, inequality, and poverty: sensitivity estimates across ten countries using the Luxembourg Income Study (LIS) database, *Review of Income and Wealth*, 34, 115-142.

Herigstad, H. (1979): *Forbrukseiningar* (Consumption units), Reports 79/16, Statistics Norway.

Røed Larsen, E. and J. Aasness (1996): Kostnader ved barn og ekvivalensskalaer basert på Engels metode og forbruksundersøkelsen 1989-91 (The cost of children and equivalence scales based on Engel's method and the Norwegian survey of household expenditure 1989-1991), in Ministry of children and families: *Offentlige overføringer til barnefamilier* (Public transfers to families with children), Norwegian Official Reports NOU 1996:13, Oslo: Akademika, 305-317.

Sen, A. (1974): Informational bases of alternative welfare approaches: aggregation and income distribution, *Journal of Public Economics*, 4, 387-403.

Leaving the parental home among young adults

Inger Texmon

Norwegian females in the generation born immediately after World War II were on average 20 years old when finally leaving their parental home, whereas their male counterparts were 1-2 years older when they left home. However, more than one half of the males and around one third of the females had left home more than once, and consequently the median age when leaving home differs by 1-2 years, depending on which event is referred to. Those born in the first decades of this century were older when they left home than later cohorts. For cohorts born after the 1950s the average age at final leave has been rather stable, whereas the median age for the first leave has increased for cohorts born after the 1940s. The findings from different data sources of the home-leaving pattern have been somewhat contradictory with respect to the behaviour of the youngest cohorts. This article describes the trends in leaving the parental home in Norway during parts of this century. The impact that certain covariates have on home-leaving is also discussed.

Introduction

Along with finishing school, starting a working career and family formation, breaking up from the parental home is a milestone in adolescents' development towards adult life. The economic consequences are usually considerable, due to independence of the parents in day-to-day consumption, as are the changes in the social contacts between the two generations. Not only does the move have consequences for the adolescents themselves, but their parents' lives are also turned around by their leaving, particularly the last time a child leaves home. This article is based on an analysis taking the view of the young mover.

The event of leaving home is also of considerable interest from the point of view of planners because it contributes to changes in the household structure. Information about the dynamics of the household structure is naturally of substantial relevance to housing requirements and patterns of consumption. Young people leaving home and the degree to which they enter into conjugal unions directly are both important components in the description of household structure.

Although the event of leaving home is of considerable importance in the formation of households, it is a relatively new topic in the study of households and families. Extensive demographic studies of the event have been rather few until recently primarily because leaving home in western countries often coincided with marriage. Leaving to live on one's own or together with friends has become a more common living arrangement during the last decades, but until the last few decades moving out to live as a single person was not the most common arrangement in West-European countries (Kiernan 1986).

Growing interest in the topic and literature in the past five to ten years have also revealed some of the weaknesses of existing data sources. Since leaving the parental home is not precisely defined, many authors consider the concept as including several rather different events. In particular, the living arrangements of students are classified differently in the literature. In a pioneering work from Australia, Young (1987) also pointed out that home-leaving frequently takes place in more than one step. In fact it is a reversible event, sometimes a gradual event, and in addition not precisely defined. In summary, studies of home-leaving do not follow a long tradition, and they suffer from a lack of suitable data sources and standards in the definitions. This explains why the topic bears evidence of seemingly inconsistent and even contradictory findings.

Until recently Norwegian demographic studies of the event have been few and have been limited to rather brief descriptions. Information on home-leaving patterns from the Norwegian Surveys of Living Conditions and the Surveys of Youth from the 1980s and the early 1990s has, however, been presented earlier (Andersen 1989, Kristiansen 1989, Moen 1991), as well as information from the Population Censuses in 1970, 1980 and 1990 (Gulbrandsen and Hansen 1985, Gulbrandsen 1992).

In the Norwegian Family and Occupation Survey 1988 (Statistics Norway 1991), which also included a question concerning the timing of home-leaving, the survey design made it possible to study the determinants of the event, dealing with covariates characterizing the childhood and adolescence of the respondents. The analysis on which this article is based is described in Texmon (1995), and it primarily uses this survey as its data source. However, other data sources are also used as a supplement to describe the patterns and trends in home-leaving. In the investigation of the determinants of home-leaving, differences between male and female behaviour are emphasized.

Data

A long list of data sources has been brought into the analysis of home-leaving of young adults inasmuch as the main

source, the Family and Occupation Survey, had some important shortcomings. All of them, however, have some kind of drawback in relation to the purpose. First of all, the information on the event is incomplete compared with other demographic events because the formal registration of home-living in the Central Population Register does not correspond to the *de facto* living arrangements. The most important sources of information on the topic are thus the representative surveys.

Although the surveys have provided important information, questions about home-leaving have not been a central theme in any of them. As noted, the Family and Occupation Survey provides a broader range of explanatory variables, as complete education and occupation histories. And with complete histories of family formation it was possible to study relations between the home-leaving and later steps in family formation. In addition, the timing of the event was more accurate (year and month) than in the alternative sources.

On the other hand, the respondents represented only six cohorts of females, born in the period 1945-1968, and two cohorts of males, born in 1945 and 1960, thereby limiting the possibility of studying trends over time. Questions about the cause of leaving are not included in the survey. Nor does the survey include questions which could shed light on the individual steps of the home-leaving process and measure the degree of returns to the parents.

For these reasons a short sequence of questions about home-leaving was included in the Omnibus Survey of Statistics Norway in November 1992. Information from this source as well as from the Family and Occupation Survey have not been used in earlier analyses of home-leaving in Norway.

Survey of the data sources

Statistics of Families is part of the general population statistics. It provides information about the number of people above the age of 17 who are registered as living with their parents. The advantage of this source is that it presents comparable data over a 20-year period for the entire population. However, the figures are derived from the Central Population Register, and one of the peculiarities of this register is that young persons who are enrolled in education and leave the parental home, are still registered at their parents' home adress. This is not changed until they take a job, marry or buy a dwelling. Leaving to enter informal cohabitation is not registered, which results in higher figures for home-living than is actually the case. Published figures from **Population Censuses** are based on the same register information as the statistics of families.

The **Survey of Living Conditions 1987** had a retrospective question on age at leaving home ("until what age did you live with your father/mother?", divided into two questions). Both this survey and other Surveys of Living Conditions (from **1980, 1983 and 1991**, respectively) as well as the **Survey of Youth 1990** provide information on persons who lived with their parents at the time of interview. In addition, the Survey of Youth provides information on the reason for leaving.

The **Family and Occupation Survey** gives an accurate timing of the final home-leaving and several useful background variables (see above).

In November 1992, a sequence of questions in the first **Omnibus Survey** of Statistics Norway was introduced to measure the extent of returns to the parental home. The Omnibus Survey also contains information on the reason for the first and the final leave. As the survey includes fewer than 2000 individuals born in the period 1913-1976, the groups are small and suitable background variables from childhood and adolescence are also lacking.

Descriptions of past trends

When do young people usually leave the homes of their parents?

Breaking up from the parental home is an event that almost all young Norwegians born after the Second World War experienced between their teens and the end of their twenties. Boys moved out somewhat later than girls, between one and two years. In the Family and Occupation Survey in which the respondents were asked when they finally left the parental home, the median age[1] for both male cohorts was 21.5 years. For the same two cohorts, one of three had moved out before their 20th birthday, while a little less than 40 per cent left between their 20th and 24th birthday. Among the corresponding female cohorts, the median age at leaving home was 20.4 years while for the youngest cohorts it was 19.7 years. Altogether more than 50 per cent of the two female cohorts left home for good between the ages of 18 and 22, while 20 per cent had moved out before their 18th birthday.

In the Survey of Living Conditions 1987, the respondents most often reported their first leave if they left more than once. This explains why the median ages are 1-2 years lower than those for comparable male and female cohorts in the Family and Occupation Survey.

In the Omnibus Survey 1992, the respondents reported the timing of both their first and final leave if they had left their parental home more than once. The results correspond rather well with the results from the other two surveys containing retrospective questions on age at leaving (median age at "final leave" with results from the Family and Occupation Survey and median age at first leave with the results from the Survey of Living Conditions). The exception is the median age for the first leave of the eldest cohorts in the survey, especially the males, which are far below the results from the Survey of Living Conditions. The difference between the median age based on first leave and

[1] Median age at the final leave is defined as the age when half of the cohort has experienced the event. Those who have not provided information about the leave are excluded.

the median age based on final leave is considerably more than 1-2 years for the eldest male cohorts in the Omnibus Survey.

The age at leaving the parental home seems to be lower in Norway and the other Nordic countries than in other European countries. This seems reasonable because in scattered populated countries like Norway and Sweden a relatively large proportion of young adults had to leave their home to enrol in school beyond the primary level compared with many of the countries in central and western Europe. In the US as well, young students often move out at the end of their teens.

Age at leaving has declined during several decades of this century

Breaking up from the parental family rather early in life, as young people do now, has also occurred in earlier periods. Historians have pointed out that in a number of countries in northern and western Europe the pattern of living together in families with more than one core was never a dominant living arrangement. A majority left their parents at the time of marriage even when we consider the period prior to this century. Others had to leave even earlier to live in the household of the employer (Dyrvik 1975, Hajnal 1982, Mayer and Schwarz 1989, Sogner 1978). According to other sources, the trends changed in the direction of staying longer in the parental home in connection with the transition to an industrialized society, especially among those who lived in towns and cities (Young 1987).

How the pattern of leaving home has changed over time during this century is primarily described by retrospective information for several **birth cohorts** included in the surveys. Results from the Survey of Living Conditions 1987 indicate that the median age has dropped by several years starting with cohorts born in the first two decades of the century and ending with the cohorts born in the middle of the century. Among males born after the turn of the century, the first half of the cohorts had not left home before the age of 25, while half of the corresponding female cohorts had left home at the age of about 22. The median age was around 20 for males of the post-war generation, and between 18 and 19 for females of the same generation. The Omnibus Survey also confirms a decline of several years in the age at leaving. This is primarily described for the final leave in the Omnibus Survey as this data material shows a more modest decline in the age of first leave compared with the Survey of Living Conditions.

A comparable fall is reported for most western countries where trends in leaving home across cohorts are documented (Goldscheider and LeBourdais 1986, Kravdal 1985, Mayer and Schwarz 1989, Young 1987). A majority of these authors point to the drop in the marriage age as a reason, but the age at leaving continued to fall after the marriage age started to rise. This entails that a greater number of young people in western countries have moved on their own during the last decades. (Among young Norwegians, however, the postponement of marriage is compensated by entering into informal cohabitation.) Nevertheless, the leaving of parental homes continued to fall until it stabilized for the 1950 and 1960 cohorts. Part of the decline can be ascribed to changes in attitudes and values accompanied by increasing individualism in western societies, also expressed more generally by a decreasing tendency to live in families (de Jong-Gierveld, Liefbroer and Beekink 1990, Mayer and Schwarz 1989). The young, the middle-aged (divorced) and the elderly all live alone more than they did in the past. Improved economic conditions and higher living standards have made this possible. The home-leaving age has declined in spite of the increase in the number of years used for education, but at the same time the possibilities for financing education have improved in many countries accompanied by an increased availability of student housing. However, cohorts born at the beginning of the century were adults during the depression of the 1930s and during the Second World War, and may consequently have lived longer in the parental home than both younger and older cohorts.

Figure 1. Median age at leaving home by birth cohort. Males and females. Three surveys

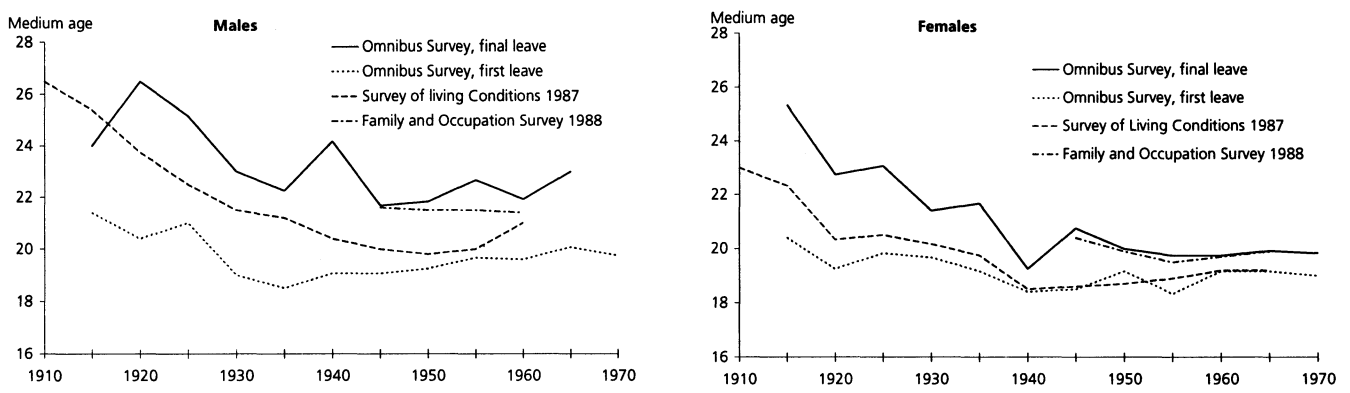


Table 1. Percentage of age group 20-24 years who reported to live with their parents. Males and females. Survey of Living Conditions 1980, 1983, 1987 and 1991, Survey of Youth 1990

	Surveys of Living Conditions				Survey of Youth
Sex	1980	1983	1987	1991	1990
Both sexes	36	38	41	34	34
Males	47	51	54	50	45
Females	25	25	27	19	23

Has the home-leaving age risen in the 1980s?

The decline in the home-leaving age has come to a halt, but whether it has been reversed to a rise in recent years is far more unclear. The data sources do not quite agree on this question (figure 1). Whether the age at final leave has increased is doubtful, especially for females. On the other hand, there are signs of an increase in the median age at first leave, particularly for males, and this rise includes cohorts born as early as the 1940s, corresponding to an increasing age at first leave already in the 1960s and 1970s. These findings correspond with the fact that the time lag between the first and final leave has been reduced for younger cohorts.

For several reasons (see next section) a comparison of the youngest respondents in the surveys is rather uncertain. As a supplement to the trends across cohorts, trends in **historic time** are identified by comparing the percentages who lived with their parents at certain ages in surveys for the period 1980-1991. Towards the end of the 1980s there was some tendency for young boys to live longer in the parental home (Surveys of Living Conditions 1980, 1983 and 1987, table 1), while a declining share lived with their parents in 1990 and 1991 (Survey of Youth 1990 and Survey of Living Conditions 1991). No increase in home-living was registered for corresponding female groups, but a slight decline was reported around 1990. Even without empirically testing the effects of rising house prices, interest rates and unemployment rates among young adults after the mid-1980s, it can be concluded that these factors did not have any **dramatic** effect on the risks of leaving home. However, combined with the decline in house prices and interest rates around 1990, this might explain the changes in home-living in the period.

According to Norwegian data sources, the trends of an increasing age at leaving home are both weak and ambiguous. The descriptions of strongly rising trends in home-living at the end of the 1980s in newspapers and popular literature have been exaggerated and even incorrect compared with the Norwegian data sources. However, an increasing home-leaving age is also reported for several countries in which trends have been analyzed or documented for sufficiently young cohorts, such as Sweden (Lundberg and Modig 1984), the United States (Glick and Lin 1986) and Australia (Young 1987). A variety of explanations is introduced in these works, but several authors emphasize the economic difficulties encountered by young people today, i.e. in the housing market and the problems in the labour market. An increasing home-leaving age as a phenomenon primarily seen among males is noted for the Netherlands (de Jong-Gierveld, Liefbroer and Beekink 1990) and Germany (Mayer and Schwarz 1989).

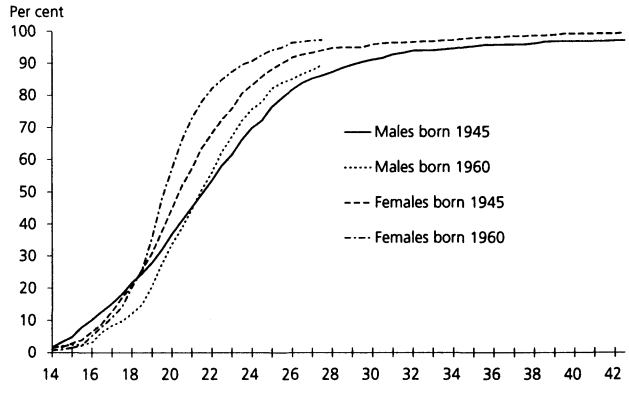
Declining spread in the age at leaving

Although the average age at leaving has not undergone considerable changes for cohorts born after World War II, the changes in the age pattern have been more unambiguous, at least for males. Among the males in the Family and Occupation Survey born in 1945, as many as 10 per cent had moved out before the age of 16, whereas the activity of moving was more concentrated around the early 20s among those born in 1960 (figure 2). On the other hand, the percentage still living with their parents at the age of 30 was higher in the 1945 cohort than in the 1960 cohort.

Also among females, home leaving was more concentrated for later cohorts than in the 1945 cohort, but the changes were rather modest among females. In fact, the event of leaving home has also been more concentrated around the median age among females than among males in both the cohorts.

The changes across cohorts can be explained by changes in the school system as the length of compulsory education increased during the period between the completion of schooling by the older and younger cohorts. Increasing the length of compulsory education included a geographically decentralized school system. No one had to leave their place of residence at the age of 14 or 15 either to work or to attend school.

Figure 2. Percentage having left home by age. Males and females born 1945 and 1960



Source: Family and Occupation Survey 1988.

Females left home earlier than males

The clearest difference in home-leaving between the sexes, however, is the lower leaving age of females (1-2 years for post-war cohorts). This was reported for the two parallel cohorts of the Family and Occupation Survey as well as for comparable cohorts of the other data sources. The eldest cohorts in the alternative data sources showed a 2-3 year difference between the home-leaving age of males and females. The earlier leaving by girls is reported for all western countries with available data on leaving home.

The fact that females break up earlier than males can largely be ascribed to the difference in age of marriage and cohabitation by males and females. The Family and Occupation data demonstrate that the female and male home-leaving age also differs from those leaving to live on their own, but not by much more than half a year on average. Other factors are that females from rural areas often leave early to find a job or attend school in the cities, while their male counterparts are more attracted by the local labour markets and consequently have the opportunity to stay at home for some time after finding a job. Several findings indicate that young men more often take financial considerations into account (Brusdal 1984, Gulbrandsen, Hansen and Gulbrandsen 1992), which corresponds with the findings (see later section) that economic variables have a greater impact on male behaviour than on female behaviour.

A popular but not empirically tested explanation of earlier home-leaving by girls is their earlier maturity and fitness for the practical challenges of their own household. On the other hand, it has been documented that girls participate more actively in housework in the parental home when still living there, and they are also exposed to greater control from their parents. Conflicts as a reason for leaving is more often reported for females than for males (Goldscheider and Waite 1987, Lundberg and Modig 1984). It thus appears that young females have more to gain and less to lose by leaving the parental home than is the case for young males, and it has also been reported that they return less frequently (DaVanzo and Goldscheider 1990, Young 1987).

There is not only a difference in the home-leaving age between the sexes. The analysis of the Family and Occupation Survey demonstrates that male and female behaviour is to a large extent influenced by different covariates as well.

More about the apparent contradictions of the data sources

We have already seen to what extent the level and trends of home-leaving depend on the definition of the event. In the Omnibus Survey there was a sequence of eight questions to describe the process, including questions about the reason for first and final leave. Five per cent of the respondents were home-living returners or temporarily outside the parental home, while 40 per cent of the respondents had left their parental home for good but had returned once in their lives. Thus 45 per cent of the respondents have at least once returned to their parental home or plan to do so.

Table 2. Percentage having lived contemporarily outside the parental home by living arrangement at time of interview. Per cent. Males and females. Groups of birth cohorts

Sex	Cohorts born	Total	Not left finally at interview		Left finally at interview	
			Never lived outside parental home	Lived outside parental home contemporarily	Left more than once	Left once
Both sexes	Total	100	6.7	4.7	40.7	47.9
	Before 1940	100	0.0	0.5	49.0	50.5
	1940-49	100	0.3	2.1	46.3	51.4
	1950-59	100	0.3	1.3	45.7	53.5
	After 1959	100	21.2	12.5	26.7	39.7
Males	Total	100	6.7	6.4	47.5	39.4
	Before 1940	100	0.0	0.3	54.1	45.6
	1940-49	100	0.6	2.3	56.2	41.1
	1950-59	100	0.5	2.4	52.7	44.4
	After 1959	100	21.7	18.0	31.9	28.5
Females	Total	100	6.7	2.8	33.2	57.3
	Before 1940	100	0.0	0.8	43.0	56.3
	1940-49	100	0.0	1.9	34.8	63.2
	1950-59	100	0.0	0.0	36.5	63.5
	After 1959	100	20.7	6.9	21.4	51.0

Source: Omnibus Survey 1992.

Males have returned more frequently than females, 54 per cent compared with 36 per cent (table 2, the sum of the two mid columns). Among cohorts born before 1960, who were old enough to have left for the last time, the percentage of returners showed little variation between the older and younger groups of males. Females, on the other hand, had a slightly declining risk of returning across the cohorts. Cohorts born after 1960, however, might not have finished their career of returns to the parental home. Although the risk of returning did not decrease across the male cohorts, there is a trend towards shorter intervals between the first and final leave, for males as well as for females (not shown).

It tallies with other findings that males return more frequently than females (Young 1987). The extent of leaving in more than one step is also in accordance with her findings. Return to the parental home after military service is an obvious explanation, whereas it is more doubtful whether the returns of divorced males to their parents make any important contribution.

Table 3. Percentage in the age group 20-29 years registered or reported to live with their parents

Data source	1970	1974	1980	1983	1987	1990	1991
Statistics of families	-	31	36	-	-	38	-
Censuses	32	-	35	-	-	39	-
Surveys of Living conditions	-	-	23	24	24	-	22

As noted earlier in the introduction and data sections, there are several sources of error and interpretation problems when coping with data on the event of home-leaving. The registration of students at the parents' address and the ambiguity of the event are two main problems. In addition, caution must be exercised in interpreting the retrospective data. Home-leaving is an event which took place a long time ago for the eldest cohort in the surveys, entailing a considerable risk of recall error. At the opposite end of the age scale there is another problem. As the survey samples were drawn from the Population Register, the probability of missing a home-living young adult is less than that of missing one who has *de facto* left home, and there is thus an increasing bias with younger cohorts in the surveys.

The overestimation of home-living by the age group 20-29 years in the register can be demonstrated by comparing results from different sources (table 3). The percentage of young adults who live with their parents is, as expected, much lower when using surveys than using register data. According to the register, the shares are about 1.5 times greater than the shares obtained from the surveys. The difference has been increasing, however, over time. The higher share of students in the young population and the increasing degree of cohabitation at the expense of marriage explain why a rising share of moves by the young is not registered. The impression derived from censuses and statistics of families, i.e. that the home-leaving age has generally been increasing for several decades, can thus be ascribed to registration problems and is not in accordance with reality.

The determinants of leaving

A large range of determinants

A large number of covariates can be expected to contribute to explaining the behaviour of leaving home. They can be divided into some main groups:

- The housing market, both prices and availability
- The qualities of the parental home, whether it makes it possible to lead an independent life
- The relationship between the two generations
- Educational institutions and the local labour market in the place of residence
- Status of family formation, whether one is planning to enter a conjugal union
- Attitudes towards and desire for independence

Indicators describing the housing market as well as characteristics of the parents' dwelling and the psycho-social relationship in the family are variables that were not available for this analysis of home-leaving, and they are thus not excluded because they were not expected to be important. In fact, the housing market is often mentioned as a variable which can explain the breaking up from home, as is the case here, although causality from the housing market on changes in the pattern of leaving home is usually not proved. In a few Swedish studies, however, it is strongly argued that there is a close correlation (Linden 1990, Lundberg and Modig 1984).

Earlier Norwegian studies have focused on the opposite relation, i.e. the effects of the pattern of leaving home on housing requirements (Gulbrandsen, Hansen and Gulbrandsen 1992). As noted earlier, however, changes in the Norwegian housing market in the 1980s might be the reason for a temporary slowdown in the leaving of male adolescents.

The importance of the quality of relationships inside the parental home, on the other hand, is well documented. There is comprehensive literature documenting that young people leave earlier in the event of a marital breakdown between their parents, especially when a stepfather (stepmother) is introduced, assuming all other factors to be equal. At the other end of the scale, it has been demonstrated that a high level of "service" and comfort at home slows down the leaving process (de Jong-Gierveld, Liefbroer and Beekink 1990), whereas financial resources in general may speed up the leaving, according to the same authors. The higher standard of Norwegian family dwellings during the past decades should in that case explain an increased trend in home-living if all other factors were equal.

The other groups of determinants are discussed in the following sections.

Method

As noted earlier, only the Family and Occupation Survey was used in the analysis of the determinants of leaving. The main reason is that the survey, which is retrospective to a large extent, contains better information on the childhood and adolescence of the respondents. To analyze the impact that several background factors had on the move from the parental home, we have estimated multivariable regression models with the risk of leaving as a dependent variable, through hazard rate analysis. The estimated transition intensities both describe the *risk of experiencing* the event at the chosen age interval, and *how early* in the interval the event occurred.

Intensities of home-leaving are high inasmuch as almost all respondents have experienced the event. Differences in the risk of leaving between two groups are then to be interpreted as differences in the timing of the event. Among two groups with equal risks, however, there can be differ-

ences in the lower end of the age interval which are compensated in the opposite end of the interval. In this presentation, however, only the main effects will be commented on. Table 4 shows some results of a study in which the age interval 14-29 years was included.

Socio-economic background has relatively strong influence on male behaviour

In Norway, females from rural areas left home earlier than their female counterparts who grew up in or near the five largest cities (most central municipalities), all other conditions being equal (table 4). Females from smaller or middle-sized towns (intermediate level) also left somewhat earlier than those from the cities, but not as early as those from rural parts of the country (least central municipalities). This is a result of the broader range of educational and job opportunities in the towns and cities. The regional differences for leaving among males has nevertheless followed a different pattern. On the one hand, the most education-oriented group of young men from rural areas often left home early, like the females, while other groups were not in such a hurry to leave home. Sons of parents in the primary sector, who were planning to take over the parental home, have had a tendency to remain in the area, but also a larger group of young men from rural areas have sought employment in the local labour market and have stayed home for a relatively long time.

For males, the socio-economic background played a more important role than the place at adolescence. As noted earlier, sons of parents in the primary sector had low risks of moving out, but there were obvious differences between the other groups as well. Sons of the middle classes had greater risks of leaving home than the sons of skilled workers, who in turn had greater risks than sons of unskilled workers. All in all, the socio-economic background did not have any significant effect on female behaviour although

Table 4. Relative risks of leaving home. Main effects of several covariates. 3 models for each sex separately

Variable	Category	Males			Females		
		(1)	(2)	(3)	(1)	(2)	(3)
Cohort	1945	1	1	1	0.83	0.91	0.81
	1950				1	1	1
	1955				1.16	1.14	1.20
	1960	1.04	1.04	1	1.13	1.04	1.22
	1965				0.95	0.88	1.08
	1968				0.81	0.74	0.99
Region of adolescense	Most central municipalities	0.96	0.94	0.97	0.90	0.85	0.89
	Intermediate, southern part	1	1	1	1	1	1
	Intermediate, nothern part	1.12	1.13	1.15	1.16	1.05	1.17
	Least central municipalities	0.97	0.98	0.98	1.32	1.32	1.36
Sosio-economic background	Unskilled worker	0.91	0.93	0.94	1	1	1
	Skilled worker	1	1	1	0.89	0.90	0.92
	White collar employee	1.26	1.23	1.27	0.90	0.92	0.95
	Primary sector	0.77	0.77	0.83	1	1.05	1.04
Number of siblings	0	0.87			0.89		
	1-2	1			1		
	3 or more	1.15			1.20		
Religious activity (church attendances)	0	0.94			1.05		
	1-2	1			1		
	3 or more	1.15			0.93		
Sexual debut	No debut		0.54			0.49	
	Less than 2 years after debut		1			1	
	2-4 years after debut		0.94			1.14	
	More than 4 years after debut		0.88			1.21	
Educational level	Primary school			0.63			0.64
	Secondary school			1			1
	University level			1.80			1.12
Main activity	Not enrolled in education			1.43			2.05
	Enrolled in education			1			1

Source: Family and Occupation Survey 1988.

there was a tendency for daughters of unskilled workers and of the primary sector to leave earlier. When we studied only the left part of the age scale, the differences proved to be significant (not shown here).

Several authors in various countries have reported that the resources of the family have a strong positive effect on home-leaving, in the direction of speeding up the event (Mayer and Schwarz 1989), and some of them emphasize that, in particular, it is leaving to live on one's own that is primarily influenced.

For both sexes, there was a modest but significant tendency to leave the family earlier when growing up with more than two siblings, other factors being equal. For males, this tendency was stronger in the older cohort than in the younger one. This effect must be ascribable to the more crowded dwellings of large families.

Indicators of attitudes

Although both the resources and characteristics of the families, as well as "possibility structures" such as the labour market, marriage market and the housing market, are or should be key aspects in a study of home-leaving, more general sets of attitudes and values are also pointed to as explanatory factors for leaving home. This is in accordance with many findings in the literature, indicating that ethnical and religious background make a contribution to the leaving pattern, not only through socio-economic status.

Religious activity at the time of interview is used here as an indicator of attitudes and values, although the event of leaving home had occurred many years earlier. Religious activity, however, is usually accepted as a variable with enough stability to allow for that. The effects of religious activity on the pattern of leaving home, however, were either absent (among males) or weak among females where there was a tendency for the religiously active to stay with their families.

It is questionable if it is possible to interprete early sexual activity as an indicator of attitudes. Nevertheless it has been demonstrated that this speeds up the home-leaving. The effect is stronger on female than on male behaviour. The causal relationship is also questionable and most probably both an early leave and an early debut are a consequence of sets of attitudes and values, i.e. orientation against family formation, independence, or an early identification with the role of an adult.

The importance of educational level, labour force participation and income

Since the Family and Occupation Survey provides complete histories of educational activities and labour force participation, both the effect of educational level and educational activities can be measured. A high level of education generally speeded up the home-leaving, all other factors being equal. This is most unambiguous for the male respondents. Females, who on average moved out earlier, had usually left home before finishing a degree at university level. For the small minority who remained at home, however, the risk of moving was higher than for the other educational groups at the same age. On the other hand, the group of early leavers was dominated by those who did not plan to go on to higher education (at the lower ages the differentiation into educational levels was not fulfilled). (The impact that education has on female behaviour is thus the opposite when the educational level at the time of interview is used; this is not shown here, but discussed in more detail in Texmon (1995)).

As expected, the risk of leaving home varied considerably depending on the situation of young adults with respect to educational activities and labour force participation. In the table a distinction is only made between being enrolled in school or not enrolled. For both sexes, the students had considerably less risk of leaving home than others. Among males, those who were employed had the highest risks of leaving, and the time used for other activities was generally limited, except for military service. On average, females have spent more time neither in education nor employment even before they left their parental home. Home-workers (probably unmarried mothers), however, had the highest risks of leaving their parents among females.

The high risks of leaving for those in the labour force are probably largely ascribable to the need to leave in order to find employment outside the place in which the parents live. Neither the length of the working period nor the accumulated income has any positive effect on the risk of leaving. Among males, however, a high monthly income proved to have a weak positive effect in the direction of speeding up the leaving.

Home-leaving and family formation

More than half have lived without partner outside the parental home

As mentioned earlier, the Family and Occupation Survey has provided an opportunity to study the connection between home-leaving and later steps in family formation. In the analysis, this has been limited to the study of the first formation of a conjugal union. Although the breaking up from the parental family is usually considered the first step in the direction of family formation, as many as 12 per cent of the males and 10 per cent of the females in the study reported that they entered a union *before* they finally left their parental home. One third of the female respondents and one fourth of the males had, in addition, left home at the same time as they reported union formation.

Disregarding those who have not reported home-leaving, 60 per cent of the males and somewhat more than 50 per cent of the females have lived on their own after leaving home. Among the males, the share was not changed over the two cohorts, whereas the females showed an increased

tendency of independent life between the 1945 and 1955 cohort, which then was reversed to a decline for later cohorts. The Norwegian survey confirms, however, that the share leaving at the time of marriage has been reduced, but this is compensated by a rising share who leave home to start informal cohabitation.

From the Family and Occupation Survey it is also possible to study the length of the periods of independent life for those who have left home without entering a union. In general, males live on their own longer than females, and the length of the period has, on average, been reduced across the cohorts. The reduction is probably due to the increased tendency of informal cohabitation, which usually takes place at a lower age than marriage (there is also a danger of drawing the wrong conclusions since some of the cohorts had not completed union formation at the time of interview, but this was taken into account).

The difference in median age between the sexes at the time of the first union was around 2.5 years for the two cohorts represented in the survey, whereas the difference in the median age at leaving was less, i.e. 1-2 years. This is in accordance with the finding that males, on average, live alone outside the parental home more frequently and for longer periods. Since those who have left home to enter a conjugal union probably have contributed considerably to the differences in home-leaving age, it was of interest to see if the entire difference could be explained by the age difference and couples. This proved not to be the case, but the differences in home-leaving age turned out to be less among those who moved on their own, 1/2-3/4 year.

Which reasons for leaving do the respondents report?

Marriage was the most important reason for leaving home for a long time

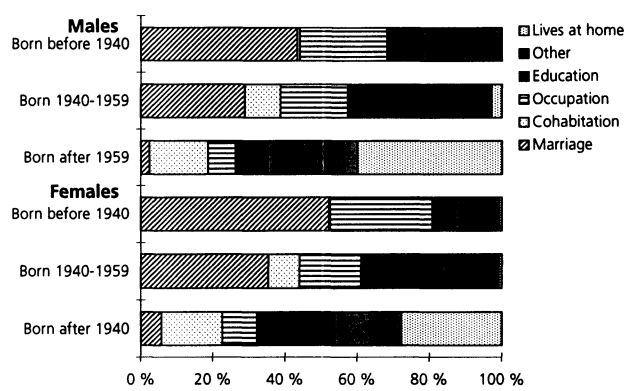
Unlike the Family and Occupation Survey, the Omnibus Survey 1992 included the respondents' own reason for leaving the parental home. It also provided an indication of changes in reasons for leaving over a longer period than could have been achieved through the Family and Occupation Survey.

Marriage was given as the most important reason for leaving the parental home for good in the generation born prior to 1940 (52 per cent of the females and 44 per cent of the males). Informal cohabitation was unusual in this generation, and we also find that virtually no home-leaving was due to this reason among these cohorts. Employment and education were given as the reason for leaving the parental home by about 35 per cent for both males and females, with employment as the main reason. The remaining moves (21 per cent for men and 13 per cent for women) were primarily based on the desire to live independently, as well as military service for men (5 percentage points).

Most of the respondents in the generation born in the two decades after 1940 had also left the parental home for good when they were interviewed in 1992. Home-leaving as a result of a conjugal union had declined slightly to less than 40 per cent for men and 43 per cent for women. In line with general trends in informal cohabitation, this has also increased in importance as a reason for leaving. For about a third of the men born between 1940 and 1959 who left the parental home to enter a conjugal union, this started as informal cohabitation, while the corresponding share for women was a fourth. The percentage of home-leaving due to either employment or education was the same for men and rose slightly for women compared with the previous generation. Education had become an increasingly important reason for leaving in line with a longer period of education, particularly for women, and employment had also become of lesser importance as a reason for leaving.

Among the youngest, born in 1960 or later, almost none who had left the parental home at the time of interview had done so due to marriage. Informal cohabitation had become a more important reason for leaving, but it appears that the percentage who moved to enter a conjugal union has declined (to slightly more than one out of four). This is probably because many in this age group (16-32 at the time of interview) had not yet left the parental home for good. As many as 25 per cent of the youngest males, or just less than half of those who had moved, indicated other reasons for leaving than family formation, education and employment, with half stating that they wanted to live on their own as the most important reason. In the Survey of Youth 1990, the distribution of reasons for leaving given by respondents born in the period 1966-1974 was about the same as those for the youngest groups in the Omnibus Survey, except that more men emphasized employment and education and slightly fewer indicated the desire to live independently as the most important reason.

Figure 3. Main reason for the final leave from parental home. Percentage distribution. Males and females. Three groups of birth cohorts



Source: Omnibus Survey 1992.

The causal pattern changes substantially when the first leave is applied to those who have indicated more than one leave in the Omnibus Survey. Family formation as a reason for leaving is reduced considerably, whereas virtually all other reasons take on increased importance, particularly military service among males.

Analysis of home-leaving based on specific reasons for leaving

An identification of reasons for leaving was also attempted with the help of life histories in the Family and Occupation Survey, which did not contain direct questions on the reasons for leaving but did provide the timing of important events to the nearest month. This was done with a view to carrying out a hazard rate analysis as described earlier for each reason for leaving. This breakdown showed clearly that there is considerable variation in the pattern of how key background variables influence the various types of home-leaving.

For home-leaving which coincided with enrolment in a new school, males and females were to a far greater extent influenced by the same factors than for home-leaving as a whole. For example, regional and socio-economic factors had almost the same effect on leaving among females and males in connection with education, which is not the case when all home-leaving is studied. Home-leaving among males and females to enter a conjugal union, on the other hand, was influenced by a common set of factors to a considerably lesser extent.

All in all, male behaviour in home-leaving is ascribable to a larger extent to economic variables than female behaviour, while it may appear that the female home-leaving pattern is influenced to a greater extent by variables which express different attitudes than is the case for home-leaving among males. It thus appears that the greatest differences between male and female home-leaving behaviour are related to leaving to enter a conjugal union, and one possible explanation is that the financial position is somewhat more important for men when entering a conjugal union than for women. However, a further testing of this hypothesis lies outside the scope of this analysis.

Summary and conclusions

Females in the generation born immediately after World War II were on average 20 years old when finally leaving their parental home, whereas their male counterparts were 1-2 years older when they left home. However, more than one half of the males and around one third of the females had left home more than once. Those born in the first decades of this century were older when they left home than later cohorts. For cohorts born after the 1950s the average age at final leave has been rather stable, whereas the median age for the first leave has increased for cohorts born after the 1940s.

For young girls, the place where they lived during adolescence was of substantial importance, while socio-economic background played a major role for the movement of young boys. The number of siblings had a modest influence on both male and female behaviour. Religious activity did not seem to have any effect on home-leaving other than a slight slowing down of leaving among girls, while those with sexual experience had a greater risk of leaving home. Sexual experience influenced the breaking up by young men as well, but not so much as among young girls. For girls, there was also an independent effect of an early debut. Educational level, whether the person was employed or not and income were more significant for home-leaving among males. However, education and employment had effects on female behaviour as well. Male behaviour in leaving home is ascribable to economic variables to a greater extent than female behaviour. On the other hand, female behaviour is to a somewhat greater extent explained by variables which express attitudes and values.

Young men move on their own slightly more frequently than young women. They also live alone for a longer period, on average, before they enter conjugal unions. With respect to the reason for leaving, the male and female distributions are nearly equal. There are, however, considerable differences between the elder and younger cohorts in the surveys in the distribution of reasons. Differences between the sexes in the distribution of reasons alone cannot explain the differences in male and female behaviour. Moving for educational reasons is influenced by many of the same factors. On the other hand, moving directly into marriage or cohabitation is influenced in different ways for males and females. The financial position of the males is more important upon entering a union than the financial position of females.

References

Andersen, Arne (1989): Unge flytter nå stadig senere hjemmefra (Young adults are now older when they leave the parental home), *Samfunnspeilet* **3**, 3, 15-17.

Brusdal, Ragnhild (1984): *Ung voksen. Sparing, planlegging og framtidsorientering* (Young adults. Saving, Planning and future orientation), Report 50-1984, Fund for marketing and distribution research, Oslo.

DaVanzo, Julie and Frances K. Goldscheider (1990): Coming home again: Returns to the parental home of young adults, *Population Studies* **44**, 241-255.

De Jong Gierveld, Jenny, Aart C. Liefbroer and Eric Beekink (1990): The effect of parental resources on patterns of leaving home among young adults in the Netherlands. Paper to: Workshop on application of the life course approach to household dynamics in contemporary Europe, Ghent, 7-9 June, 1990.

Dyrvik, Ståle (1975): Barnet i familien og slektskrinsen (The child in the family and lineage), *Forskningsnytt* **24**, 4, 8-13.

Glick, Paul C. and Sung-Ling Lin (1986): More young adults are living with their parents: Who are they? *Journal of Marriage and the Family* **48**, 107-112.

Goldscheider, Frances K. and Celine LeBourdais (1986): The decline in age at leaving home, 1920-1979, *Sociology and Social Research* **70**, 2, 143-145.

Goldscheider, Frances K. and Linda J. Waite (1987): Nest-leaving patterns and the transitions to marriage for young men and women, *Journal of Marriage and the Family* **49**, 507-516.

Gulbrandsen, Ole (1992): *Husholdningsutviklingen i Norge. Resultater fra Folke- og boligtellingen 1990* (Household trends in Norway. Results from the Population and Housing Census 1990), Project report 109, Norwegian Building Research Institute, Oslo.

Gulbrandsen, Ole and Thorbjørn Hansen (1985): *Nye husholdninger og boligbehovet. Om boforhold og boligmarked* (New households and housing requirements. On housing conditions and the housing market), Universitetsforlaget, Oslo.

Gulbrandsen, Ole, Thorbjørn Hansen and Lars Gulbrandsen (1992): *Ungdom og bolig. Hva vet vi i dag om unges etablering?* (Young adults and housing. What do we know today about how they get established in the housing market?). Project report 112:1992, Norwegian Building Research Institute.

Hajnal, John (1982): Two kinds of preindustrial household formation system, *Population and Developmental Review* **8**, 3, 449-494.

Kiernan, Kathleen (1986): Leaving home: Living arrangements of young people in six West-European countries, - *European Journal of Population* **2**, 177-184.

Kravdal, Øystein (1985): Flytting fra foreldrehjemmet: Regionale og sosiale forskjeller blant svenske kvinner født 1936-60 (Moving from the parental home: Regional and social differences among Swedish women born 1936-60), *Stockholm Research Reports in Demography* 26, Stockholm University.

Kristiansen, Jan Erik (1989): *Ungdoms levekår* (Young adults' living conditions). Statistics Norway, Ministry of Culture and Science, Universitetsforlaget.

Lindén, Anna-Lisa (1990): Obstacles for young Swedes to find a home on their own. *Scandinavian Housing and Planning Research* **7**, 195-205.

Lundberg, Stefan and Arne Modig (1984): *Ungdomars etablering på bostadmarknaden* (Getting established in the housing market among young adults), Report R182-1984, Building Research Council, Stockholm.

Mayer, Karl Ulrich and Karl Schwarz (1989): "The process of leaving the parental home: Some German data in E. Grebenik, C. Höhn and R. Mackensen (ed.): *Later phases of the family cycle. Demographic aspects*, International Studies in Demography, Clarendon Press, Oxford.

Moen, Kjetil (1991): Ungdomsundersøkelsen 1990 (Survey of Youth 1990), Preliminary report, Report 1991:2, Directorate of Labour.

Sogner, Sølvi Bauge (1978): Familie, husstand og befolkningsutvikling (Family, household and population trends). *Heimen* **17**, 699-710.
Statistics Norway (1991): *Familie- og yrkesundersøkelsen 1988* (Family and Occupation Survey 1988), NOS B 959.

Texmon, Inger (1995): *Ut av redet. En demografisk analyse av flytting fra foreldrehjemmet* (Nest-leaving. A demographic analysis of leaving the parental home), Reports 1995/4, Statistics Norway.

Young, Christabel M. (1987): *Young people leaving home in Australia. The trend towards independence*. Australian Family Formation Project Monograph No. 9, Institute of Family Studies, Melbourne.

Research publications in English

New titles

Reports

Marie W. Arneberg:
Theory and Practice in the World Bank and IMF Economic Policy Models. Case study Mozambique
Reports 96/13, 1996. pp. 28.
ISBN 82-537-4296-7

The aim of this report is to give some insight into the content and use of the economic policy model for developing countries in the World Bank (WB) and the International Monetary Fund (IMF). It gives a presentation of the theoretical foundation of the model, which might be labeled as "monetarisk"; private, and particularly public, consumption must be kept down. This will make resources available for private investment which will lead to economic growth, while at the same time avioding inflation. The causal relations in the model are discussed with regard to both Keynesian and Structuralist economic theory. Section 3 gives a presentation of the model as it appears in practice and how it is used by the WB staff. The conclusion is that the WB/IMF model mainly provides a framework for securing consistency between exogenous assumptions and targets for future economic development, and does not necessarily give a prediction of the most likely development. This can be justified only if WB/IMF give outsiders information about the assumptions used, so as to enable other donors to make their own evaluation about the realism and quality of the projections. Section 4 gives an evaluation of the projections for Structural Adjustment Programmes in Mozambique from 1987 to 1994. It shows that although the Mozambiquan authorities have followed World Bank prescribed policy, the outcome of that policy has not at all been in accordance with the model projections. The main failure lies in the modelling of exports and inflation. There is also a possibility that production is determined by demand. As this is in conflict with the basic theoretical foundation of the model, model prescribed (tight) policy may actually worsen the economic situation in Mozambique by strengthening stagnation.

Discussion Papers

Kjell Arne Brekke, Vegard Iversen and Jens Aune:
Soil Wealth in Tanzania
DP no. 164, 1996. pp. 26.

Many African countries are richly endowed with land, but the productive potential of the land base has been underutilized in farming systems with low intensity of external inputs and high intensity of labour. At the same time, mining and erosion of soils have been common features of rural Africa in the 1990s. National income, possibly of considerable size, is foregone in countries with pervasive poverty. This paper studies the income and wealth from the agricultural sector in Tanzania. The gains from a policy redesign are examined by formulating an intertemporal optimization problem where land degredation processes such as soil mining and erosion are taken explicitly into account. We show that land degredation processes, if dealth with in the optimal way, would deviate from the patterns that are currently observed.

Two versions of the model are presented. One considering only the nutrient stocks as determinant of land productivity. The other version also includes the effective rooting depth as determinant of land productivity. Using these models, we compute the soil wealth under the assumption that the opportunity cost of labour is equal to current wages, and under the assumption that opportunity cost of labour is zero. In both cases our estimates suggest that the potential gains from a change in agricultural management are considerable.

Hilde Christiane Bjørnland:
The Dynamic Effects of Aggregate Demand, Supply and Oil Price Shocks
DP no. 174, 1996. pp. 41.

This paper analyses the dynamic effects of aggregate demand, supply and real oil price shocks on real output and unemployment. Oil price shocks are included explicitly in the model, to investigate their role in explaining periods of global recessions. The different structural disturbances are identified by imposing long-run and short-run restrictions on a vector autoregressive model. The analysis is applied to Germany, Norway, United Kingdom and United States. For all countries except Norway, an adverse oil price shock has had a negative effect on output in the short run, and for US, the effect is negative also in the long run. However, whereas the first oil price shock was the most important factor behind the severity of the recession in themiddle 1970s, adverse demand and supply shocks were more important than the second oil price shock in explaining the recession in the early 1980s. For Norway, a small oil exporting country, an adverse oil price shock stimulates the economy, although in the long run, the effect is most likely zero.

Taran Fæhn and Leo Andreas Grünfeld:
Recent Leaps Towards Free Trade. The Impact on Norwegian Industry and Trade Patterns
DP no. 176, 1996. pp. 33.

In this study we model effects on Norwegian industry and trade patterns of the recently implemented trade reforms - the WTO-agreement, the EEA-treaty, the OECD ship building reform and the EFTA fishing agreement - through changes in tariffs, NTBs, government procurement and subsidy policy as well as shifts in foreign prices and demand. We employ a highly disaggregated CGE model to simulate the difference between an economy adapted to the mentioned reforms and an economy based on a multilateral maintenance of the prereform trade system. Exports and import shares are modelled differently depending on commodity characteristics. Labour supply and national wealth are exogenously determined in order to focus on the gains from reallocations of given resources. The results indicate strong effects on the patterns of industry and trade. Specifically, we observe an increase in the production of services and highly processed goods, and a decrease in the production of raw materials and less processed commodities.

Ray Barrell and Knut A. Magnussen:
Counterfactual Analyses of Oil Price Shocks using a World Model
DP no. 177, 1996. pp. 34.

Oil price shocks have played a dominant role in the macroeconomic development of the world economy over the last twenty-five years. In this paper a large, estimated, macro-economic world model with time varying trade weights, monetary and fiscal policy rules and explicit modelling of the behaviour of the OPEC countries is used for counterfactural analyses of oil price shocks. An alternative history with constant real oil prices is developed, showing that the recessions in the OECD area in 1974/75 and in 1980 would have been milder without the preceding oil price hike, while the 1982 recession seems unrelated to oil prices. A separate simulation indicates that the oil price drop in 1985/86 prevented a small recession from developing. The paper also shows that macroeconomic oil price effects vary considerably between the US, Germany and Japan according to the degree of oil dependence, trade with OPEC and the working of domestic labour markets. In particular there are notable differences in inflationary effects in Germany and the US. Results are tested against alternative specifications of monetary and fiscal policy rules.

Einar Bowitz and Stein Inge Hove:
Business cycles and fiscal policy: Norway 1973-93
DP no. 178, 1996. pp. 43.

Effects of fiscal policy on macroeconomic variables during 1973-93 are analysed using a disaggregated macroeconometric model of the Norwegian economy. Fiscal policy is measured as deviations from estimated trends for disaggregated policy variables. The policy effects are related to the cyclical situation of the economy. Variations in fiscal policy instruments have reduced output volatility during 1973-93 by approximately 10 per cent, according to our results. On average the behaviour of local government has been procyclical. Partial effects of various fiscal instruments are calculated. During certain episodes fiscal policy appeared procyclical, an effect that is due to the aim of stabilizing the current account.

Hilde Christiane Bjørnland:
Sources of Business Cycles in Energy Producing Economies - The case of Norway and United Kingdom
DP no. 179, 1996. pp. 40.

This paper analyses the sources of business cycles in economies that have an important energy producing sector. Especially, I investigate the effects of oil and gas extractions (energy booms) on the manufacturing sector, and analyse whether there is any evidence of a "Dutch disease", that is whether energy booms have had adverse effects on the manufacturing base. In additions to energy booms, I identify three other types of disturbances in the economy; aggregate demand, supply and oil price shocks. The different structural disturbances are identified by imposing long-run and short-run (zero) restrictions on a vector autoregressive model. The analysis is applied to Norway and United Kingdom, which both discovered huge oil resources in the North Sea in the 1970s. There is no evidence of a Dutch disease in Norway, and manufacturing output has actually benefited from both energy discoveries and higher oil prices. In UK on the other hand, manufacturing output has declined in response to energy booms, although the effects is small compared to the effects of the other shocks that are present at the time.

Karine Nyborg:
The Political Man and Contingent Valuation: Motives Do Count
DP no. 180, 1996. pp. 35.

In addition to his role as a consumer pursuing his own interests, an individual may also regard himself as an ethical observer, judging matters from society's point of view. It is clear which of these possibly conflicting roles respondents in contingent valuation studies take on. This leads to ambiguities in the interpretation of reported willingness to pay. I formalize this problem using a simple model of respondents' behaviour, based on the concept to subjective social welfare functions. The model may provide one explanation to several puzzling phenomena often found in contingent valuation studies; such as large discrepancies between willingness to pay and willingness to accept, frequent occurence of "outliers" willing to pay extremely large amounts, and certain kinds of framing effects.

Documents

Karine Nyborg:
Environmental Valuation, Cost-Benefit Analysis and Policy Making: A Survey
Documents 96/12, 1996. pp. 25.

Per Richard Johansen and Knut A. Magnussen:
The Implementation Model. A Macroeconomic Model for Saudi Arabia
Documents 96/13, 1996. pp. 94.

This report gives a documentation of the Implementation Model, developed by the Research Department of Statistics Norway as part of the construction of a system of macroeconomic models for the use of the Ministry of Planning in Saudi Arabia. The main purpose of the model is to serve as a tool for assisting in the preparation and monitoring of the five-year development plans carried out by the Ministry, as well as providing a basis for analyses of fiscal and monetary policies and shocks from the oil sector and abroad. The model is a demand oriented, macroeconometric model based on national account data and built over an input-output core. The focus of the model is the private non-oil sector of the economy, but it also contains a description of the petroleum sector and the government sector. The report contains a presentation of the model structure, its main properties as described by simulation exercises as well as the historical tracking performance (1980-91). In addition, the construction of the input-output core and estimation of econometric equations is documented.

Ådne Cappelen and Knut A. Magnussen:
The Selection Model. A General Equilibrium Model for Saudi Arabia
Documents 96/14, 1996. pp. 79.

This report gives a documentation of the Selection Model, developed by the Research Department of Statistics Norway as part of the construction of a system of macroeconomic models for use of the Ministry of Planning in Saudi Arabia. The model is designed to be a model tool in the preparation of the five-year development plans, in particular for analysing consequences of investment programs, undertaken by the government and the private sector. The model is based on the structure of the Implementation Model (see Johansen and Magnussen, 1996) including an input-output core, but extended with sectoral production functions, labour demand and capital stock relations. The structure of industry models is designed in accordance with the special features of the Saudi Arabian economy, with most of export activities based on petroleum products. The report contains a general discussion of CGE-models, a presentation of the chosen model structure for the Selection Model and a description of its main properties by simulation exercises. In addition, the estimation of production functions is documented.

Pål Boug and Leif Brubakk:
Impacts of Economic Integration on Energy Demand and CO_2 emissions on Western Europe
Documents 96/15, 1996. pp. 34.

This paper provides an empirical study of likely impacts of future economic integration or lack of integration on energy demand and CO_2 emissions in Western Europe. We employ a multisector energy demand model of thirteen Western European countries to study two scenarios that differ with respect to the degree of economic integration in the next decades. The simulations show that energy demand and accompanying CO_2 emissions are likely to increase substantially more by the year 2020 in a situation with further economic integration, as scheduled in the Maastricht treaty, than in a situation with a more economically fragmented Western Europe. Our findings are interesting in light of the EU stabilization target of CO_2 emissions at the 1990 level by the year 2000, and they give an indication of future emissions when no specific policy measures are undertaken. Thus, this study supports the view that an effective energy policy is called for in order to stabilize CO_2 emissions in Western Europe.

John K. Dagsvik:
Probabilistic Models for Qualitative Choice Behavior: An Introduction
Documents 96/16, 1996. pp. 91.

The econometric disipline has been criticized for being too similar to mathemathical statistics and only to a limited degree linked to formalized theoretical models. This is particularly the case as regards formulation and specification of the stochastic elements in econometric models. Ragnar Frisch, who is known to be the originator of econometrics, expressed both in theory and practice an opposite ideal; namely econometrics as an almost symbiotic blend of statistical methodology and mathematically formulated theory, cf. Frisch (1926). See also Bjerkholt (1995).

Theory and econometric methodology for qualitative choice behavior is developed in a tradition which I believe is somewhat closer to the ideal of Frisch than much of the traditional textbook approach to econometrics. This stems from the fact that the theory of qualitative choice is rooted in a tradition where probabilistic concepts and formulations play a key role in contrast to the point of departure in traditional micro theory, which is deterministic. Since probabilistic concepts are integral parts of the theory of qualitative choice this means that the gap between theory and empirical model specification in applications often becomes less wide than is the case in the traditional micro-economic approach.

The present compendium is the first version of an introductory course in the theory of qualitative choice behavior (often called the theory of discrete choice). Some of the material I present here draws on a Ph.D. course I gave at the Department of Economics, University of Wisconsin, during the Fall semester of 1990.

Knut H. Alfsen and Knut Einar Rosendahl:
Economic Damage of Air Pollution
Documents 96/17, 1996. pp. 29.

The paper considers available information on physical dose-response functions to air pollution and damage of human health and important materials. The dose-response functions are translated into a form suitable for implementation in multi-sectoral computable general equilibrium models (CGEs) and simulations are carried out illustrating the direct and indirect (allocation) costs of environmental damage to human health and materials on economic growth in Norway. The model is further supplemented with a module relating the volume of road traffic to traffic accidents and their consequences on labour productivity and public health expenditure.

Knut H. Alfsen:
Why Natural Resource Accounting?
Documents 96/18, 1996. pp. 28.

The paper briefly outlines the content and structure of the Norwegian natural accounts as these have been developed over the years. Initially, work on the natural resource accounts was motivated by a desire to improve the management of natural resources within a national context. Over time, it was gradually recognized that lack of systematically organized data is not the main obstacle to a satisfactory resource management in Norway. Therefore, more emphasis is now put on trying to integrate environment and resource issues within the traditional economic planning tools, highlighting the linkages between economic development, natural resource use and environmental concerns. The integration secures consistency between economic analysis and analysis of important environmental and resource issues such as air pollution and energy use. In our view this provides better support for decision makers than the often suggested proposal of "correcting" GDP or other aggregates of the national accounts.

Overall, the aim of the paper is to illustrate the importance of organizing the natural resource accounts in a manner that facilitates its usefulness for analytical purposes. This will enchance the probability that the linkages between economic, natural resource, and environmental issues are brought to the attention of the decision makers. Quite often it turns out that one can show, even with a limited set of data, that proper management of natural resources and the environment makes economic sense.

This paper was presented at an International Workshop of Forest Resource Accounts in Tokyo arranged by Institute of Developing Economies, October 14-18, 1996.

Finn Roar Aune, Torstein Bye, Tor Arnt Johnsen and Alexandra Katz:
NORMEN. A General Equilibrium Model of the Nordic Countries Featuring a Detailed Electricity Block
Documents 96/19, 1996. pp. 40.

This paper presents a Nordic energy demand model, NOREN, which links together the electricity market, the economy and the environment in a general equilibrium framework. The model is an extension of an earlier partial energy market model developed at Statistics Norway. In contrast to that and other partial models (i.e. the bulk of the literature) where there are no feedback effects from the electricity prices to the rest of the economy, in NORMEN all prices are determined simultaneously. By adding a macroeconomic block to the model, the scale effects on electricity demand due to electricity price changes can be captured, rather than just first round price effects. In this paper, we document the model structure of NORMEN, parameter estimation procedures, and data collecting pricess. This document marks the end of the first stage of this project: model building and data collecting. In the next stage, we will use the model, among other things, to analyse the effect of various energy policies on electricity consumption, electricity prices, CO_2 emissions, and several general economic indicators.

Previously issued

Social and Economic Studies

Ingvild Svendsen:
Empirical Tests of the Formation of Expectations. A Survey of Methods and Results. **SES no. 83, 1993.**

Klaus Mohn:
Modelling Regional Producer Behaviour - A Survey. **SES no. 86, 1994.**

Knut A. Magnussen:
Old-Age Pensions, Retirement Behaviour and Personal Saving. A Discussion of the Litterature. **SES no. 87, 1994.**

Nils Martin Stølen:
Wage Formation and the Macroeconomic Functioning of the Norwegian Labour Market. **SES no. 89, 1995.**

Tom Kornstad:
Empirical Life Cycle Models of Labour Supply and Consumption. **SES no. 91, 1995.**

Hilde Christiane Bjørnland:
Trends, Cycles and Measures of Persistence in the Norwegian Economy. **SES no. 92, 1995.**

Reports

Natural resources and the environment 1992. **Reports 93/1A, 1993.**

Kjersti-Gro Lindquist:
Empirical Modelling of Export of Manufactures: Norway 1962-1987. **Reports 93/18, 1993.**

Dag Kolsrud:
Stochastic Simulation of KVARTS91. **Reports 93/20, 1993.**

Sarita Bartlett:
The Evolution of Norwegian Energy Use from 1950 to 1991. **Reports 93/21, 1993.**

Haakon Vennemo:
A Growth Model of Norway with a Two-way Link to the Environment. **Reports 94/5, 1994.**

Klaus Mohn:
Monetarism and Structural Adjustment - The Case of Mozambique. **Reports 94/11, 1994.**

Erling Holmøy, Gunnar Nordén and Birger Strøm:
MSG-5. A Complete Description of the System of Equations. **Reports 94/19, 1994.**

Ragnhild Balsvik and Anne Brendemoen:
A Computable General Equilibrium Model for Tanzania. Documentation of the Model, the 1990 - Social Accounting Matrix and Calibration. **Reports 94/20, 1994.**

Nico Keilman and Helge Brunborg:
Household Projections for Norway, 1990-2020. Part I: Macrosimulations. **Reports 95/21, 1995.**

Leif Brubakk, Morten Aaserud, Wilma Pellekaan and Fritz von Ostvoorn:
SEEM - An Energy Demand Model for Western Europe. **Reports 95/24, 1995.**

Terje Skjerpen:
Seasonal Adjustment of First Time Registered New Passenger Cars in Norway by Structural Time Series Analysis. **Reports 95/30, 1995.**

Einar Bowitz, Nils-Øyvind Mæhle, Virza S. Sasmitawidjaja and Sentot B. Widoyono:
MEMLI - The Indonesian Model for Environmental Analysis. Technical Documentation. **Reports 96/1, 1996.**

Knut H. Alfsen, Pål Boug and Dag Kolsrud:
Energy demand, carbon emissions and acid rain. Consequences of a changing Western Europe. **Reports 96/12, 1996.**

Discussion Papers

Ingvild Svendsen:
Testing the Rational Expectations Hypothesis. Using Norwegian Microeconomic Data. **DP no. 90, 1993.**

Einar Bowitz, Asbjørn Rødseth and Erik Storm:
Fiscal Expansion, the Budget Deficit and the Economy: Norway 1988-91. **DP no. 91, 1993.**

Rolf Aaberge, Ugo Colombino and Steinar Strøm:
Labor Supply in Italy. **DP no. 92, 1993.**

Tor Jakob Klette:
Is Price Equal to Marginal Costs? An Integrated Study of Price-Cost Margins and Scale Economies among Norwegian Manufacturing Establishments 1975-90. **DP no. 93, 1993.**

John K. Dagsvik:
Choice Probabilities and Equilibrium Conditions in a Matching Market with Flexible Contracts. **DP no. 94, 1993.**

Tom Kornstad:
Empirical Approaches for Analysing Consumption and Labour Supply in a Life Cycle Perspective. **DP no. 95, 1993.**

Tom Kornstad:
An Empirical Life Cycle Model of Savings, Labour Supply and Consumption without Intertemporal Separability. **DP no. 96, 1993.**

Snorre Kverndokk:
Coalitions and Side Payments in International CO_2 Treaties. **DP no. 97, 1993.**

Torbjørn Eika:
Wage Equations in Macro Models. Phillips Curve versus Error Correction Model Determination of Wages in Large-Scale UK Macro Models. **DP no. 98, 1993.**

Anne Brendemoen and Haakon Vennemo:
The Marginal Cost of Funds in the Presence of External Effects. **DP no. 99, 1993.**

Kjersti-Gro Lindquist:
Empirical Modelling of Norwegian Exports: A Disaggregated Approach. **DP no. 100, 1993.**

Anne Sofie Jore, Terje Skjerpen and Anders Rygh Swensen:
Testing for Purchasing Power Parity and Interest Rate Parities on Norwegian Data. **DP no. 101, 1993.**

Runa Nesbakken and Steinar Strøm:
The Choice of Space Heating System and Energy Consumption in Norwegian Household. **DP no. 102, 1993.**

Asbjørn Aaheim and Karine Nyborg:
"Green National Product": Good Intensions, Poor Device? **DP no. 103, 1993.**

Knut H. Alfsen, Hugo Birkelund and Morten Aaserud:
Secondary Benefits of the EC Carbon/ Energy Tax. **DP no. 104, 1993.**

Jørgen Aasness and Bjart Holtsmark:
Consumer Demand in a General Equilibrium Model for Environmental Analysis. **DP no. 105, 1993.**

Kjersti-Gro Lindquist:
The Existence of Factor Substitution in the Primary Aluminium Industry. A Multivariate Error Correction Approach on Norwegian Panel Data. **DP no. 106, 1993.**

Snorre Kverndokk:
Depletion of Fossil Fuels and the Impact of Global Warming. **DP no. 107, 1994.**

Knut A. Magnussen:
Precautionary Saving and Old-Age Pensions. **DP no. 108, 1994.**

Frode Johansen:
Investment and Financial Constraints. An empirical Analysis of Norwegian Firms. **DP no. 109, 1994.**

Kjell Arne Brekke and Pål Børing:
The Volatility of Oil Wealth under Uncertainty About Parameter Values. **DP no. 110, 1994.**

Margaret J. Simpson:
Foreign Control and Norwegian Manufacturing Performance. **DP no. 111, 1994.**

Yngve Willasen and Tor Jakob Klette:
Correlated Measurement Errors, Bounds on Parameters, and a Model of Producer Behavior. **DP no. 112, 1994.**

Dag G. Wetterwald:
Car Ownership and Private Car Use. A Microeconometric Analysis Based on Norwegian Data. **DP no. 113, 1994.**

Knut Einar Rosendahl:
Does Improved Environmental Policy Enhance Economic Growth? Endogenous Growth Theory Applied to Developing Countries. **DP no. 114, 1994.**

Leif Andreassen, Dennis Fredriksen and Olav Ljones:
The Future Burden of Public Pension Benefits. A Microsimulation Study. **DP no. 115, 1994.**

Anne Brendemoen:
Car Ownership Decisions in Norwegian Households. **DP no. 116, 1994.**

Audun Langørgen:
A Macromodel of Local Government Spending Behaviour in Norway. **DP no. 117, 1994.**

Kjell Arne Brekke:
Utilitarism, Equivalence Scales and Logarithmic Utility. **DP no. 118, 1994.**

Kjell Arne Brekke, Hilde Lurås and Karine Nyborg:
Sufficient Welfare Indicators, Allowing Disagreement in Evaluations of Social Welfare. **DP no. 119, 1994.**

Tor Jakob Klette:
R&D, Scope Economies and Company Structure: A "Not-so-Fixed Effect" Model of Plant Performance. **DP no. 120, 1994.**

Yngve Willassen:
A Generalization of Hall's Specification of the Consumption Function. **DP no. 121, 1994.**

Erling Holmøy, Torbjørn Hægeland and Øystein Olsen:
Effective Rates of Assistance for Norwegian Industries. **DP no. 122, 1994.**

Klaus Mohn:
On Equity and Public Pricing in Developing Countries. **DP no. 123, 1994.**

Jørgen Aasness, Erling Eide and Terje Skjerpen:
Criminometrics, Latent Variables, Panel Data, and Different Types of Crime. **DP no. 124, 1994.**

Erik Biørn and Tor Jakob Klette:
Errors in Variables and Panel Data: The Labour Demand Response to Permanent Changes in Output. **DP no. 125, 1994.**

Ingvild Svendsen:
Do Norwegian Firms Form Extrapolative Expectations? **DP no. 126, 1994.**

Tor Jakob Klette and Zvi Griliches:
The Inconsistency of Common Scales Estimators when Output Prices are Unobserved and Endogenous. **DP no. 127, 1994.**

Knut Einar Rosendahl:
Carbon Taxes and the Petroleum Wealth. **DP no. 128, 1994.**

Søren Johansen and Anders Rygh Swensen:
Testing Rational Expectations in Vector Autoregressive Models. **DP no. 129, 1994.**

Tor Jakob Klette:
Estimating Price-Cost Margins and Scale Economies from a Panel of Microdata. **DP no. 130, 1994.**

Leo Andreas Grünfeld:
Monetary Aspects of Business Cycles in Norway. An Exploratory Study Based on Historical Data. **DP no. 131, 1994.**

Kjersti-Gro Lindquist:
Testing for Market Power in the Norwegian Primary Aluminium Industry. **DP no. 132, 1994.**

Tor Jakob Klette:
R&D, Spillovers and Performance among Heterogenous Firms. An Empirical Study Using Microdata. **DP no. 133, 1994.**

Kjell Arne Brekke and Hanne Gravningsmyhr:
Adjusting NNP for Instrumental or Defensive Expenditures. An Analytical Approach. **DP no. 134, 1994.**

Thor Olav Thoresen:
Distributional and Behavioural Effects of Child Care Subsidies. **DP no. 135, 1995.**

Tor Jakob Klette and Astrid Mathiassen:
Job Creation, Job Destruction and Plant Turnover in Norwegian Manufacturing. **DP no. 136, 1995.**

Karine Nyborg:
Project Evaluations and Decision Processes. **DP no. 137, 1995.**

Leif Andreassen:
A Framework for Estimating Disequilibrium Models with Many Markets. **DP no. 138, 1995.**

Leif Andreassen:
Aggregation when Markets do not Clear. **DP no. 139, 1995.**

Terje Skjerpen:
Is there a Business Cycle Component in Norwegian Macroeconomic Qarterly Time Series? **DP no. 140, 1995.**

John K. Dagsvik:
Probabilistic Choice Models for Uncertain Outcomes. **DP no. 141, 1995.**

Annegrete Bruvoll, Solveig Glomsrød and Haakon Vennemo:
The environmental drag on long-term economic performance: Evidence from Norway. **DP no. 143, 1995.**

Torstein Bye and Tor Arnt Johnsen:
Prospects for a Common, Deregulated Nordic Electricity Market. **DP no. 144, 1995.**

Brita Bye:
A Dynamic Equilibrium Analysis of a Carbon Tax. **DP no. 145, 1995.**

Thor Olav Thoresen:
The Distributional Impact of the Norwegian Tax Reform Measured by Disproportionality. **DP no. 146, 1995.**

Erling Holmøy and Torbjørn Hægeland:
Effective Rates of Assistance for Norwegian Industries. **DP no. 147, 1995.**

Jørgen Aasness, Torstein Bye and Hans Terje Mysen:
Welfare Effects of Emission Taxes in Norway. **DP no. 148, 1995.**

Jørgen Aasness, Erik Biørn, and Terje Skjerpen:
Distribution of Preferences and Measurement Errors in a Disaggregated Expenditure System. **DP no. 149, 1995.**

Einar Bowitz, Taran Fæhn, Leo Andreas Grünfeld and Knut Moum:
Transitory Adjustment Costs and Long Term Welfare Effects of an EU membership The Norwegian Case. **DP no. 150, 1995.**

Ingvild Svendsen:
Dynamic Modelling of Domestic Prices with Time-varying Elasticities and Rational Expectations. **DP no. 151, 1995.**

Ingvild Svendsen:
Forward- and Backward Looking Models for Norwegian Export Prices. **DP no. 152, 1995.**

Audun Langørgen:
On the Simultaneous Determination of Current Expenditure, Real Capital, Fee Income, and Public Debt in Norwegian Local Government. **DP no. 153, 1995.**

Alexandra Katz and Torstein Bye:
Returns to Publicly Owned Transport Infrastructure Investment. A Cost Function/Cost Share Approach for Norway, 1971-1991. **DP no. 154, 1995.**

Karl Ove Aarbu: Some Issues About the Norwegian Capital Income Imputation Model. **DP no. 155, 1995.**

Pål Boug, Knut Anton Mork and Trond Tjemsland:
Financial Deregulation and Consumer Behavior: the Norwegian Experience. **DP no. 156, 1995.**

Bjørn E. Naug and Ragnar Nymoen:
Import Price Formation and Pricing to Market: A Test on Norwegian Data. **DP no. 157, 1995.**

Rolf Aaberge:
Choosing Measures of Inequality for Empirical Applications. **DP no. 158, 1995.**

Tor Jakob Klette and Svein Erik Førre:
Innovation and Job Creation in a Small Open Economy. Evidence from Norwegian Manufacturing Plants 1982-92. **DP no. 159, 1995.**

Steinar Holden, Dag Kolsrud and Birger Vikøren:
Noisy signals in target zone regimes. Theory and Monte Carlo experiments. **DP no. 160, 1995.**

Torbjørn Hægeland:
Monopolistic Competition, Resource Allocation and the Effects of Industrial Policy. **DP no. 161, 1996.**

Sverre Grepperud:
Poverty, Land Degradation and Climatic Uncertainty. **DP no. 162, 1996.**

Sverre Grepperud:
Soil Conservation as an Investment in Land. **DP no. 163, 1996.**

John K. Dagsvik, Dag G. Wetterwald and Rolf Aaberge:
Potential Demand for Alternative Fuel Vehicles. **DP no. 165, 1996.**

John K. Dagsvik:
Consumer Demand with Unobservable Product Attributes. Part I: Theory. **DP no. 166, 1996.**

John K. Dagsvik:
Consumer Demand with Unobservable Product Attributes. Part II: Inference. **DP no. 167, 1996.**

Rolf Aaberge, Anders Björklund, Markus Jäntti, Mårten Palme, Peder J. Pedersen, Nina Smith and Tom Wennemo:
Income Inequality and Income Mobility in the Scandinavian Countries Compared to the United States. **DP no. 168, 1996.**

Karine Nyborg:
Some Norwegian Politicians' Use of Cost-Benefit Analysis. **DP no. 169, 1996.**

Elin Berg, Snorre Kverndokk and Knut Einar Rosendahl:
Market Power, International CO_2 Taxation and Petroleum Wealth. **DP no. 170, 1996.**

Rolf Aaberge, Ugo Colombino and Steinar Strøm:
Welfare Effects of Proportional Taxation: Empirical Evidence from Italy, Norway and Sweden. **DP no. 171, 1996**

John K. Dagsvik:
Dynamic Choice, Multistate Duration Models and Stochastic Structure. **DP no. 172, 1996.**

John K. Dagsvik:
Aggregation in Matching Markets. **DP no. 173, 1996.**

Annegrete Bruvoll and Karin Ibenholt:
Future Waste Generation. Forecasts Based on a Macroeconomic Model. **DP no. 175, 1996.**

Reprints

T.Ø. Kobila:
An application of reflected diffusions of the problem of choosing between hydro and thermal power generation. **Reprints no. 63, 1993.** Reprint from Stochastic processes and their applications (44 (1993) 117-139). Elsevier Science Publishers B.V., North-Holland, 1993. ISSN 0304-4149.

Olav Bjerkholt and Eystein Gjelsvik:
Common Carriage for Natural Gas: the Producers' Perspective. **Reprints no. 64, 1993.** Reprint from Einar Hope and Steinar Strøm (eds.) *Energy Markets and Environmental Issues: A European Perspective.* Scandinavian University Press 1992. ISBN 82-00-21435-4.

T.Ø. Kobila:
A Class of Solvable Stochastic Investment Problems Involving Singular Controls. **Reprints no. 65, 1993.** Reprints from *Stochastics and Stochastics Reports*, 43, 29-63. Gordon and Breach Science Publishers, S.A., USA, 1993.

Jørgen Aasness, Erling Eide and Terje Skjerpen:
Criminometrics, Latent Variables, and Panel Data. **Reprints no. 66, 1993.** Reprint from K. Haagen, D.J. Bartholomew and M. Deistler (eds.): *Statistical Modelling and Latent Variables.* Elsevier Science Publishers B.V. North-Holland, 1993.

Jørgen Aasness, Erik Biørn and Terje Skjerpen:
Engel Functions, Panel Data, and Latent Variables. **Reprint no. 68, 1994.** Reprint from *Econometrica*, 1993, 61, 6, 1395-1422.

Knut H. Alfsen and Hans Viggo Sæbø:
Environmental Quality Indicators: Background, Principles and Examples from Norway. **Reprints no. 69, 1994.** Reprint from *Environmental and Resource Economics*, 1993, 3, 415-435.

John K. Dagsvik:
Discrete and Continuous Choice, Max-Stable Processes, and Independence from Irrelevant Attributes. **Reprints no. 70, 1994.** Reprint from Econometrica, Vol. 62, 1994, No. 5. 1179-1205.

Snorre Kverndokk:
Coalitions and Side Payments in International CO_2 Treaties. **Reprints no. 72, 1995.** Reprint from Ekko C. Van Ierland (ed.): International Environmental Economics, Theories, Models and Applications to Climate Change, International Trade and Acidification. Developments in Environmental Economics Vol.4, 1994, pp. 45-76. Elsevier Science Publishers B.V., Amsterdam.

Knut Anton Mork, Øystein Olsen and Hans Terje Mysen:
Macroeconomic Responses to Oil Price Increases and Decreases in Seven OECD Countries. **Reprints no. 73, 1995**. Reprint from The Energy Journal Vol. 15 (4).

John K. Dagsvik:
How Large is the Class of Generalized Extreme Value Random Utility Models? **Reprints no. 74, 1995.**

Olav Bjerkholt:
Introduction: Ragnar Frisch, the originator of Econometrics. **Reprints no. 78, 1995.**

Rolf Aaberge, John K. Dagsvik and Steinar Strøm:
Labor Supply Responses and Welfare Effects of Tax Reforms. **Reprints no. 81, 1995.**

Snorre Kverndokk:
Tradeable CO_2 Emission Permits: Initial Distribution as a Justice Problem. **Reprints no. 82, 1996.**

Iulie Aslaksen, Trude Fagerli and Hanne A. Gravningsmyhr:
Measuring Household Production in an Input-Output Framework: the Norwegian Experience. **Reprints no. 83, 1996.**

Iulie Aslaksen and Charlotte Koren:
Taxation, Time Use and the Value of Unpaid Labor: Policy Implications for the Redistribution of Income. **Reprints no. 85, 1996.** Reprint from Scandinavian Journal of Economics no. 4, Vol. 97, 1995.

Knut H. Alfsen, Mario A. De Franco, Solveig Glomsrød and Torgeir Johnsen:
The Cost of Soil Erosion in Nicaragua. **Reprints no. 86, 1996.**

Documents

Haakon Vennemo:
Welfare and the Environment. Implications of a recent tax reform in Norway. **Documents 94/1, 1994.**

Knut H. Alfsen:
Natural Resource Accounting and Analysis in Norway. **Documents 94/2, 1994.**

Olav Bjerkholt:
Ragnar Frisch 1895-1995. **Documents 94/3, 1994.**

Anders Rygh Swensen:
Simple examples on smoothing macroeconomic time series. **Documents 95/1, 1995.**

Eystein Gjelsvik, Torgeir Johnsen, Hans Terje Mysen and Asgeir Valdimarsson:
Energy Demand in Iceland. **Documents 95/2, 1995.**

Chunping Zhao, Olav Bjerkholt, Tore Halvorsen and Yu Zhu:
The Flow of Funds Accounts in China. **Documents 95/3, 1995.**

Hanne A. Gravningsmyhr:
Analysing Effects of Removing Survivors' Pensions, Using the Microsimulation Model LOTTE. **Documents 95/5, 1995.**

Pål Boug:
User's Guide. The SEEM Model Version 2.0. **Documents 95/6, 1995.**

Einar Bowitz, Nils Øyvind Mæhle, Virza S. Sasmitawidjaja and Sentot B. Widoyono:
MEMLI An Environmental Model for Indonesia. Technical Documentation of Data Programs and Procedures. **Documents 95/7, 1995.**

Knut H. Alfsen, Torstein Bye, Solveig Glomsrød and Henrik Wiig:
Integrated Assessment of Soil Degradation and Economic Growth in Ghana. **Documents 95/8, 1995.**

Olav Bjerkholt:
Ragnar Frisch and the Foundation of the Econometric Society and Econometrica. **Documents 95/9, 1995.**

Dag Kolsrud:
Documentation of Computer Programs that Extend the SEEM Model and Provide a Link to the RAINS Model. **Documents 96/1, 1996.**

Elin Berg:
Some Results from the Literature on the Impact of Carbon Taxes on the Petroleum Wealth. **Documents 96/4, 1996.**

Olav Bjerkholt, Kjell Arne Brekke and Robin Choudhury:
The Century Model - on the Long Term Sustainability of the Saudi Arabian Economy. **Documents 96/7, 1996.**

Robin Choudhury:
The Century Model. Technical Documentation of Computer Programs and Procedures. **Documents 96/8, 1996.**

Robin Choudhury and Knut A. Magnussen:
The Implementation Model. Technical Documentation of Computer Programs and Procedures. **Documents 96/9, 1996.**

Robin Choudhury:
The Selection Model. Technical Documentation of Computer Programs and Procedures. **Documents 96/10, 1996.**

Robin Choudhury:
The OM95 - An Oil Model for the Kingdom of Saudi Arabia. Technical Documentation of Computer Programs and Procedures. **Documents 96/11, 1996.**

Notater

Mario A. De Franco, Solveig Glomsrød, Henning Høie, Torgeir Johnsen and Eduardo Marín Castillo:
Soil Erosion and Economic Growth in Nicaragua. **Notater 93/22, 1993.**

Olav Bjerkholt:
Review of Macroeconomic Modelling Needs of the Ministry of Planning of the Kingdom of Saudi Arabia. **Notater 93/25, 1993.**

Tom Eek, Jan Erik Sivertsen, Tor Skoglund and Knut Ø. Sørensen:
Economic Accounts at Regional Level: Methods and Data for Norway. **Notater 93/35, 1993.**

Knut H. Alfsen:
Demand for commercial and own transport services in production sectors. **Notater 93/39, 1993.**

Jørgen Aasness and Bjart Holtsmark:
Consumer Demand in MSG-5. **Notater 93/46, 1993.**

Appendix

List of tables

Page

National accounts for Norway

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
Final consumption exp. of households and NPIS	434798	457138	107668	108190	116606	124675	114295	114011
Goods	234526	247613	56742	59036	61574	70260	61081	61877
Services	198299	206763	51484	48759	53559	52960	53435	51542
Direct purchases abroad by resident househ.	17713	17890	2742	3864	7136	4149	2956	4023
- Direct purchases by non-residents	-15740	-15127	-3300	-3469	-5664	-2694	-3177	-3430
Final consumption exp. of general government	185206	191973	47015	47537	48470	48951	49492	50222
Final consumption exp. of central government.	74902	76847	18837	19017	19400	19594	19843	20227
Central government, defence	53841	55915	13708	13836	14114	14257	14429	14711
Central government, defence	21061	20932	5129	5181	5286	5337	5414	5516
Final consumption exp. of local government	110304	115126	28178	28520	29070	29358	29649	29995
							..	..
Gross fixed capital formation	183560	197664	44848	48579	48061	56176	46009	49888
Crude petr., gas extr., transp. via pipelines	54180	48145	10407	12002	12321	13414	10190	12364
Ocean transport and oil drilling	4647	3703	1681	1551	-812	1284	892	844
Mainland industries	124732	145816	32759	35026	36552	41478	34928	36680
Manufacturing and mining	10776	15632	2792	3814	4185	4841	3410	4160
Production of other goods	11404	12179	2319	3380	3203	3278	2381	3332
General government	28276	29164	6129	6342	7384	9309	6510	6708
Dwelling service	24271	28735	6993	6966	7140	7635	6843	6829
Other services	50005	60106	14527	14524	14640	16416	15783	15651
Changes in inventories	13445	23401	8963	6372	4702	3364	9393	4720
Gross capital formation	197005	221065	53810	54952	52764	59540	55402	54608
							..	..
Final domestic use of goods and services	817009	870177	208493	210678	217839	233166	219189	218841
Demand from Mainland-Norway	744737	794927	187442	190753	201627	215104	198715	200914
							..	..
Exports	334837	355041	89294	86302	88500	90945	97528	97513
Traditional goods	128522	143413	38118	33838	34730	36727	40396	37385
Crude oil and natural gas	106440	113231	28000	28003	26353	30875	34002	36962
Ships and platforms	10597	10581	1966	3024	3525	2066	1899	1616
Services	89278	87816	21210	21437	23892	21277	21231	21550
							..	..
Total use of goods and services	1151846	1225218	297787	296980	306339	324111	316717	316354
							..	..
Imports	282104	299352	71130	73395	75114	79713	74034	74438
Traditional goods	184692	202854	49236	49878	49300	54440	53085	52305
Crude oil	867	1121	326	356	270	169	218	254
Ships and platforms	12355	12866	3059	2415	2413	4979	3129	3403
Services	84190	82511	18509	20746	23131	20125	17602	18476
							..	..
Gross domestic product	869742	925866	226657	223585	231225	244398	242683	241916
Mainland-Norway	741287	793220	194285	190291	199786	208858	203262	199669
							..	..
Oil activities and ocean transport	128455	132646	32372	33294	31439	35540	39421	42246
Mainland industries	656157	696538	172444	166804	175164	182126	178316	174496
Manufacturing and mining	104041	118140	30059	29646	28137	30298	32263	31528
Production of other goods	71254	79865	20212	16400	21477	21776	21303	15680
General government	138436	144418	35358	35771	36467	36822	37443	37961
Private services	342427	354115	86814	84988	89082	93230	87308	89328
Correction items	85129	96682	21841	23487	24622	26732	24945	25173

NATIONAL ACCOUNTS FOR NORWAY

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

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2
Final consumption exp. of households and NPIS	428584	439735	103503	104723	112474	119034	109272	108535
Goods	230865	237868	54706	56539	59076	67547	59082	59227
Services	196045	199269	49337	47704	52080	50148	50464	48774
Direct purchases abroad by resident househ.	17286	17298	2676	3827	6880	3915	2776	3781
- Direct purchases by non-residents	-15613	-14700	-3215	-3348	-5562	-2575	-3049	-3248
Final consumption exp. of general government	180868	181182	44626	45045	45653	45858	45545	45961
Final consumption exp. of central government	73232	72744	18061	18131	18283	18268	18427	18568
Central government, defence	52850	53001	13135	13221	13331	13314	13384	13522
Central government, defence	20382	19743	4926	4910	4952	4954	5044	5046
Final consumption exp. of local government	107636	108438	26565	26914	27369	27590	27118	27393
							..	..
Gross fixed capital formation	179759	187837	43184	46221	45487	52945	42963	47042
Crude petr., gas extr., transp. via pipelines	52972	46014	10054	11495	11700	12766	9596	12142
Ocean transport and oil drilling	4826	3373	1681	1595	-1067	1164	813	807
Mainland industries	121961	138449	31449	33131	34854	39015	32554	34094
Manufacturing and mining	10698	15158	2758	3700	4067	4633	3256	4000
Production of other goods	11250	11731	2262	3251	3086	3132	2266	3168
General government	27706	27562	5873	5991	6970	8729	6036	6169
Dwelling service	23526	26510	6565	6407	6565	6972	6166	6020
Other services	48781	57488	13992	13782	14166	15549	14831	14736
Changes in inventories	13506	23997	9041	6292	5283	3381	9443	4918
Gross capital formation	193266	211834	52225	52513	50770	56326	52406	51960
							..	..
Final domestic use of goods and services	802717	832751	200355	202281	208897	221218	207224	206457
Demand from Mainland-Norway	731413	759366	179579	182899	192981	203907	187371	188590
							..	..
Exports	341828	354689	88149	85221	89704	91615	95322	92631
Traditional goods	127108	132372	34644	31328	32057	34343	37869	34960
Crude oil and natural gas	116112	125818	30700	29844	30493	34781	35308	35435
Ships and platforms	10416	10954	2043	3037	3731	2143	1936	1578
Services	88191	85544	20762	21011	23422	20348	20208	20659
							..	..
Total use of goods and services	1144545	1187439	288504	287502	298601	312833	302545	299088
							..	..
Imports	279766	294127	69593	72896	73877	77761	72085	73659
Traditional goods	184085	200845	48661	49561	49049	53574	52277	51960
Crude oil	943	1244	349	382	328	185	214	218
Ships and platforms	12446	13250	3198	2566	2425	5061	3084	4166
Services	82292	78787	17385	20387	22075	18940	16509	17315
							..	..
Gross domestic product	864780	893312	218911	214606	224723	235072	230461	225429
Mainland-Norway	725221	745023	182728	179215	188319	194760	189349	184390
							..	..
Oil activities and ocean transport	139559	148290	36183	35391	36404	40312	41112	41039
Mainland industries	651036	666373	164405	160415	168421	173133	169280	164316
Manufacturing and mining	101380	104322	27099	26272	24197	26754	27806	26352
Production of other goods	69487	75588	18759	15047	20906	20876	19460	14282
General government	134578	135321	33358	33552	34066	34345	34139	34447
Private services	345591	351141	85189	85544	89251	91157	87874	89236
Correction items	74185	78649	18323	18801	19899	21627	20069	20074

NATIONAL ACCOUNTS FOR NORWAY

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
Final consumption exp. of households and NPIS	4,1	2,6	1,1	2,9	3,8	2,6	5,6	3,6
Goods	5,1	3,0	1,7	4,0	4,1	2,4	8,0	4,8
Services	3,3	1,6	1,1	0,9	1,5	3,1	2,3	2,2
Direct purchases abroad by resident househ.	8,6	0,1	-8,3	-0,3	3,8	0,3	3,8	-1,2
- Direct purchases by non-residents	13,5	-5,8	3,2	-10,2	-11,9	4,8	-5,1	-3,0
Final consumption exp. of general government	0,7	0,2	-0,4	0,1	0,4	0,6	2,1	2,0
Final consumption exp. of central government	-1,2	-0,7	-0,4	-0,6	-0,8	-0,9	2,0	2,4
Central government, defence	-0,1	0,3	0,5	0,3	0,2	0,1	1,9	2,3
Central government, defence	-3,9	-3,1	-2,8	-2,8	-3,5	-3,5	2,4	2,8
Final consumption exp. of local government	2,0	0,7	-0,4	0,6	1,2	1,6	2,1	1,8
							..	..
Gross fixed capital formation	6,9	4,5	7,1	0,3	-0,3	10,9	-0,5	1,8
Crude petr., gas extr., transp. via pipelines	-7,3	-13,1	-17,7	-30,7	-9,7	14,0	-4,6	5,6
Ocean transport and oil drilling	-30,5	-30,1	-31,9	2,5	-197,1	-493,1	-51,6	-49,4
Mainland industries	17,2	13,5	22,6	18,7	10,4	5,9	3,5	2,9
Manufacturing and mining	8,3	41,7	45,6	59,8	38,8	30,2	18,1	8,1
Production of other goods	2,5	4,3	13,1	0,4	2,4	4,5	0,2	-2,5
General government	1,6	-0,5	3,1	3,0	5,0	-8,7	2,8	3,0
Dwelling service	34,9	12,7	31,6	19,4	6,1	-0,1	-6,1	-6,0
Other services	26,6	17,8	26,3	23,3	10,8	13,2	6,0	6,9
Changes in inventories	40,2	77,7	29,8	74,7	161,0	269,6	4,4	-21,8
Gross capital formation	8,7	9,6	10,4	5,7	6,6	15,8	0,3	-1,1
							..	..
Final domestic use of goods and services	4,4	3,7	3,0	3,0	3,7	5,2	3,4	2,1
Demand from Mainland-Norway	5,2	3,8	3,9	4,7	4,1	2,7	4,3	3,1
							..	..
Exports	8,2	3,8	6,8	2,0	5,8	0,8	8,1	8,7
Traditional goods	13,1	4,1	15,1	1,1	2,1	-0,8	9,3	11,6
Crude oil and natural gas	11,6	8,4	4,6	4,4	14,8	10,0	15,0	18,7
Ships and platforms	-12,0	5,2	0,4	68,2	55,6	-48,7	-5,2	-48,1
Services	0,6	-3,0	-1,5	-5,3	-4,3	-0,6	-2,7	-1,7
							..	..
Total use of goods and services	5,5	3,7	4,1	2,7	4,3	3,9	4,9	4,0
							..	..
Imports	6,9	5,1	4,9	3,6	4,1	7,8	3,6	1,0
Traditional goods	15,3	9,1	12,4	9,5	7,0	7,8	7,4	4,8
Crude oil	-17,5	32,0	48,5	66,9	30,8	-18,9	-38,7	-43,1
Ships and platforms	-33,9	6,5	-28,2	-31,5	28,0	115,3	-3,6	62,4
Services	0,4	-4,3	-5,1	-3,5	-4,0	-4,6	-5,0	-15,1
							..	..
Gross domestic product	5,0	3,3	3,9	2,4	4,3	2,6	5,3	5,0
Mainland-Norway	4,3	2,7	3,8	2,3	3,2	1,7	3,6	2,9
							..	..
Oil activities and ocean transport	8,8	6,3	4,4	2,6	11,0	7,1	13,6	16,0
Mainland industries	4,0	2,4	3,4	1,8	2,7	1,5	3,0	2,4
Manufacturing and mining	5,4	2,9	9,3	1,2	1,3	-0,0	2,6	0,3
Production of other goods	0,8	8,8	10,1	10,4	6,7	8,6	3,7	-5,1
General government	1,1	0,6	-0,5	0,4	0,9	1,3	2,3	2,7
Private services	5,4	1,6	1,8	1,1	2,9	0,6	3,2	4,3
Correction items	7,5	6,0	7,7	6,7	6,7	3,4	9,5	6,8

NATIONAL ACCOUNTS FOR NORWAY

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
Final consumption exp. of households and NPIS	1,5	2,5	2,9	2,3	2,2	2,5	0,6	1,7
Goods	1,6	2,5	3,1	3,0	2,0	1,9	-0,3	0,1
Services	1,1	2,6	2,6	1,8	2,4	3,4	1,5	3,4
Direct purchases abroad by resident househ.	2,5	0,9	-0,0	-0,9	1,4	2,6	3,9	5,4
- Direct purchases by non-residents	0,8	2,1	1,6	2,2	2,1	2,1	1,5	1,9
Final consumption exp. of general government	2,4	3,5	4,0	3,5	3,2	3,1	3,1	3,5
Final consumption exp. of central government	2,3	3,3	3,0	3,1	3,4	3,7	3,2	3,9
Central government, defence	1,9	3,6	3,3	3,4	3,6	4,0	3,3	4,0
Central government, defence	3,3	2,6	2,3	2,2	2,9	3,0	3,1	3,6
Final consumption exp. of local government	2,5	3,6	4,7	3,8	3,1	2,8	3,1	3,3
							..	..
Gross fixed capital formation	2,1	3,1	2,5	2,8	3,6	3,2	3,1	0,9
Crude petr., gas extr., transp. via pipelines	2,3	2,3	2,1	2,7	2,5	1,4	2,6	-2,5
Ocean transport and oil drilling	-3,7	14,0	3,9	-0,4	-24,2	-6,8	9,6	7,5
Mainland industries	2,3	3,0	2,4	2,8	3,1	3,5	3,0	1,8
Manufacturing and mining	0,7	2,4	0,4	2,1	3,0	3,3	3,5	0,9
Production of other goods	1,4	2,4	1,2	2,5	2,7	3,0	2,6	1,2
General government	2,1	3,7	3,1	3,4	4,2	4,0	3,4	2,7
Dwelling service	3,2	5,1	5,0	6,3	4,7	4,9	4,2	4,3
Other services	2,5	2,0	1,4	1,1	2,1	3,0	2,5	0,8
Changes in inventories	-0,5	-2,0	-2,9	-1,3	-7,5	32,9	0,3	-5,2
Gross capital formation	1,9	2,4	1,6	2,3	2,2	3,4	2,6	0,4
							..	..
Final domestic use of goods and services	1,8	2,7	2,8	2,6	2,4	2,9	1,6	1,8
Demand from Mainland-Norway	1,8	2,8	3,1	2,7	2,6	2,9	1,6	2,1
							..	..
Exports	-2,0	2,2	6,0	3,2	-0,4	0,4	1,0	4,0
Traditional goods	1,1	7,1	11,0	8,2	6,0	3,8	-3,1	-1,0
Crude oil and natural gas	-8,3	-1,8	4,4	-1,1	-7,3	-3,0	5,6	11,2
Ships and platforms	1,7	-5,1	-4,4	-0,6	-6,8	-6,5	1,9	2,9
Services	1,2	1,4	0,5	2,0	1,0	2,1	2,8	2,2
							..	..
Total use of goods and services	0,6	2,5	3,7	2,8	1,6	2,2	1,4	2,4
							..	..
Imports	0,8	0,9	1,0	0,9	0,9	0,8	0,5	0,4
Traditional goods	0,3	0,7	0,7	1,2	0,4	0,4	0,4	0,0
Crude oil	-8,1	-2,0	-0,7	3,0	-11,0	0,7	9,2	25,3
Ships and platforms	-0,7	-2,2	-2,5	-5,1	-0,7	-2;6	6,1	-13,2
Services	2,3	2,4	2,7	1,0	2,7	3,1	0,1	4,9
							..	..
Gross domestic product	0,6	3,1	4,5	3,4	1,8	2,6	1,7	3,0
Mainland-Norway	2,2	4,2	4,9	4,2	3,6	3,9	1,0	2,0
							..	..
Oil activities and ocean transport	-8,0	-2,8	2,5	-1,2	-8,2	-3,9	7,2	9,4
Mainland industries	0,8	3,7	4,7	3,2	3,3	3,6	0,4	2,1
Manufacturing and mining	2,6	10,3	9,0	10,1	12,2	10,4	4,6	6,0
Production of other goods	2,5	3,0	7,9	5,8	-0,1	-0,0	1,6	0,7
General government	2,9	3,7	4,8	3,8	3,4	3,1	3,5	3,4
Private services	-0,9	1,8	2,6	0,3	1,6	2,6	-2,5	0,8
Correction items	14,8	7,1	5,8	11,6	5,4	6,1	4,3	0,4

NATIONAL ACCOUNTS FOR NORWAY

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
Gross domestic product	869742	925866	226657	223585	231225	244398	242683	241916
							..	..
Agriculture	12695	12077	2567	182	6114	3214	2540	125
Forestry and logging	2646	3507	1432	953	290	832	1302	854
Fishing and fish farms	6859	6445	1978	1602	1574	1290	1880	1172
Oil activities	99028	102660	25059	25817	23938	27846	31229	34362
Crude petroleum and natural gas extraction	96283	100494	24484	25400	23438	27172	30538	33654
Service activities incidental to oil and gas	2745	2167	575	417	500	674	691	708
Mining and quarrying	1533	1532	374	407	374	377	419	434
							..	..
Manufacturing	102508	116608	29686	29239	27763	29921	31843	31093
Food products, beverages and tobacco	16793	17374	4078	4471	4250	4576	5643	6175
Textiles,wearing apparel and leather products	2369	2379	691	618	493	576	626	600
Paper and paper products	4554	7744	1671	1800	2074	2200	1505	1160
Printing and publishing	11595	12004	3081	2943	2817	3163	3841	3674
Petroleum refining	2151	2054	364	415	612	663	547	691
Basic chemicals	5306	6851	1838	1820	1748	1445	1536	1448
Chemical and mineral products	9124	10383	2663	2583	2372	2765	2867	2774
Metal products	8924	12492	3303	3133	3068	2988	3066	2952
Machinery, ships and other transport equipm.	33664	37194	9792	9469	8567	9366	10289	9846
Wood products, furniture and other manuf.	8028	8133	2203	1987	1763	2180	1924	1773
							..	..
Electricity, gas and water supply	20449	23938	6806	5233	4905	6995	7308	4567
Construction	28605	33897	7430	8428	8594	9445	8274	8962
Wholesale and retail trade	83487	88735	20914	21473	21957	24391	20503	21064
Hotels and restaurants	11700	11684	2484	2746	3074	3379	2446	2742
Transport via pipelines	12590	13463	3253	3190	3231	3789	3861	3864
Other transport and communication	54415	58266	13287	14521	15348	15110	13785	15297
Inland water and coastal transport	18881	18528	4500	4802	4822	4404	4742	4469
Ocean transport	16837	16523	4060	4288	4270	3906	4331	4020
Inland water and costal transport	2044	2005	440	514	552	498	411	449
Financial intermediation and insurance	38622	36718	10858	7366	7972	10521	9259	9598
Dwelling service	62277	63398	15672	15782	15908	16037	16171	16328
Business activities	46239	47867	11533	11786	12216	12331	12439	12679
Private services	43643	45442	11626	10799	12054	10963	12293	11170
							..	..
General government	138436	144418	35358	35771	36467	36822	37443	37961
Central government	41162	42184	10337	10442	10653	10752	10899	11103
Civilian	30382	31441	7705	7783	7940	8013	8162	8317
Defence	10780	10743	2632	2659	2713	2739	2737	2786
Local government	97274	102234	25021	25329	25814	26070	26544	26858
							..	..
FISIM 1)	-31162	-29590	-7543	-7397	-7088	-7561	-7191	-7389
Value added tax and investment levy	80775	89080	20759	21478	22291	24552	22668	22812
Other taxes on products, net	34147	36010	8333	9284	8886	9507	9370	9721
Statistical discrepancy	1370	1182	293	122	533	234	98	29
							..	..
Mainland industries	656157	696538	172444	166804	175164	182126	178316	174496
Market producers	570625	607551	150463	145195	150558	161335	160683	159108
Non-market producers	213988	221633	54353	54904	56044	56332	57055	57634

Financial intermediation services indirectly measured

NATIONAL ACCOUNTS FOR NORWAY

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
Gross domestic product	5,0	3,3	3,9	2,4	4,3	2,6	5,3	5,0
							..	..
Agriculture	-4,8	7,9	2,5	-8,5	12,3	6,9	7,8	57,5
Forestry and logging	1,5	6,1	30,8	-5,8	-6,8	-5,5	-22,0	-21,9
Fishing and fish farms	12,7	7,7	4,9	11,6	4,9	9,8	15,1	3,3
Oil activities	11,8	6,9	4,1	2,4	13,7	7,6	16,6	17,2
Crude petroleum and natural gas extraction	12,0	7,2	4,8	3,0	14,1	7,3	16,6	16,8
Service activities incidental to oil and gas	2,3	-6,3	-19,5	-23,5	-1,6	22,0	14,9	45,5
Mining and quarrying	5,6	2,6	11,2	4,1	-2,4	-0,8	6,3	-0,9
							..	..
Manufacturing	5,4	2,9	9,3	1,2	1,4	0,0	2,6	0,3
Food products, beverages and tobacco	4,4	1,7	5,6	1,2	-0,6	0,9	4,7	0,7
Textiles,wearing apparel and leather products	9,3	-3,7	13,6	-3,4	-6,6	-16,8	-10,9	-4,3
Paper and paper products	9,4	4,6	9,5	7,1	3,8	-1,7	-5,1	-10,4
Printing and publishing	2,1	3,4	4,4	1,5	3,1	4,4	4,1	4,8
Petroleum refining	3,3	-9,4	-3,6	-8,1	-7,6	-17,9	0,4	1,8
Basic chemicals	3,0	0,0	5,9	0,8	-3,0	-3,8	-1,6	-9,5
Chemical and mineral products	8,4	6,7	15,6	1,5	6,2	4,2	3,3	3,6
Metal products	8,9	-2,3	5,2	-4,4	-5,0	-4,8	1,6	3,7
Machinery, ships and other transport equipm.	5,0	5,1	12,0	2,8	4,5	1,5	4,0	-0,4
Wood products, furniture and other manuf.	6,8	1,6	12,5	-0,6	-2,4	-2,5	0,7	2,9
							..	..
Electricity, gas and water supply	-5,6	8,7	1,9	8,3	8,4	16,6	7,9	-14,0
Construction	6,2	9,8	20,7	15,5	2,0	4,6	-0,3	-3,7
Wholesale and retail trade	7,8	4,0	7,5	3,5	4,2	1,2	7,2	5,8
Hotels and restaurants	11,6	-0,5	-4,4	-1,3	1,2	1,8	1,3	1,2
Transport via pipelines	12,0	8,6	6,8	3,5	15,7	8,8	16,9	19,0
Other transport and communication	10,3	7,1	9,0	6,8	5,7	7,1	2,9	6,4
Inland water and coastal transport	-7,0	0,4	3,9	2,7	-5,7	1,2	-5,7	4,4
Ocean transport	-8,7	0,8	4,8	3,6	-6,3	1,7	-6,3	5,1
Inland water and costal transport	9,5	-3,1	-4,4	-4,4	-1,3	-2,6	0,2	-0,8
Financial intermediation and insurance	6,6	-5,8	-4,9	-6,6	-7,6	-4,1	-1,3	8,5
Dwelling service	1,0	1,0	0,9	1,0	1,1	1,1	1,2	1,3
Business activities	4,6	0,2	-5,1	-0,9	14,3	-5,4	4,0	3,6
Private services	-0,6	-0,1	-0,2	-0,6	0,1	0,2	2,1	0,7
							..	..
General government	1,1	0,6	-0,5	0,4	0,9	1,3	2,3	2,7
Central government	-0,7	-0,8	-0,8	-0,6	-0,9	-0,8	1,4	2,2
Civilian	1,3	-0,1	-0,0	-0,1	-0,1	-0,0	1,6	2,5
Defence	-6,1	-2,9	-3,1	-2,1	-3,3	-3,0	0,9	1,1
Local government	1,9	1,1	-0,3	0,9	1,7	2,2	2,7	2,9
							..	..
FISIM 1)	4,7	1,0	0,7	-0,0	1,4	2,1	-0,5	-0,4
Value added tax and investment levy	6,3	4,5	5,2	5,2	4,7	3,1	5,1	3,1
Other taxes on products, net	7,5	4,1	5,8	2,7	5,8	2,4	9,4	8,4
Statistical discrepancy	.	.	208,4	231,2	-362,0	-446,2	56,3	62,1
							..	..
Mainland industries	4,0	2,4	3,4	1,8	2,7	1,5	3,0	2,4
Market producers	6,3	3,9	4,9	2,5	5,3	3,0	5,9	5,9
Non-market producers	1,0	0,7	0,0	0,6	0,9	1,1	2,0	2,0

Financial intermediation services indirectly measured

NATIONAL ACCOUNTS FOR NORWAY

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

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2
Final consumption expenditure of households .	412881	434687	102119	102621	110961	118987	108426	108193
							..	..
Food, beverages and tobacco.	88324	93728	20862	23556	24303	25007	21723	23986
Clothing and footwear	26787	25969	5474	6243	6136	8116	5550	6309
Housing, water, electr., gas and other fuels . . .	96935	101326	26360	24238	23695	27033	27670	25147
Furnishings, household equipment etc.	26567	28113	6157	5978	6987	8991	6565	6031
Health	10153	10736	2555	2659	2684	2837	2750	2824
Transport	64094	68910	15846	17504	18735	16825	18209	19887
Leisure, entertainment and culture	38107	40802	10007	8377	11353	11065	10648	8788
Education	1992	2061	488	432	560	580	512	461
Hotels, cafes and restaurants	23173	23325	4854	5376	6739	6357	5003	5548
Miscellaneous goods and services	34777	36952	10072	7862	8297	10721	10017	8620
Direct purchases abroad by resident househ. . .	17713	17890	2742	3864	7136	4149	2956	4023
- Direct purchases by non-residents	-15740	-15127	-3300	-3469	-5664	-2694	-3177	-3430
							..	..
Goods	234526	247613	56742	59036	61574	70260	61081	61877
Services	176382	184311	45935	43190	47915	47272	47566	45724
Services, dwellings	79263	81892	20240	20256	20497	20898	20893	21075
Other services	97119	102420	25695	22934	27417	26374	26673	24649

Table A8. Final consumption expenditure of housholds. Pct. change in volume from preceding year

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2
Final consumption expenditure of households .	4,4	2,8	1,2	3,1	4,0	2,8	5,7	3,8
							..	..
Food, beverages and tobacco.	3,1	3,8	0,8	5,2	5,6	3,4	3,4	0,5
Clothing and footwear	1,8	-3,8	-1,0	-2,9	-3,9	-6,1	5,9	5,2
Housing, water, electr., gas and other fuels . . .	1,6	1,8	-0,5	1,9	1,6	4,2	3,9	1,4
Furnishings, household equipment etc.	9,4	5,1	4,5	5,5	6,7	4,0	5,6	-0,1
Health	0,3	-0,6	0,5	-1,2	-1,6	-0,1	1,4	2,1
Transport	9,9	3,7	7,2	2,4	3,0	2,5	14,2	13,0
Leisure, entertainment and culture	6,4	5,5	5,7	5,7	5,2	5,4	6,0	5,2
Education	-0,0	0,4	3,3	0,5	-1,2	-0,5	-0,2	1,6
Hotels, cafes and restaurants	8,4	-0,7	-5,9	-1,5	1,3	2,1	1,2	0,8
Miscellaneous goods and services	3,6	2,8	0,4	3,1	3,2	4,5	2,3	3,2
Direct purchases abroad by resident househ. . .	8,6	0,1	-8,3	-0,3	3,8	0,3	3,8	-1,2
- Direct purchases by non-residents	13,5	-5,8	3,2	-10,2	-11,9	4,8	-5,1	-3,0
							..	..
Goods	5,1	3,0	1,7	4,0	4,1	2,4	8,0	4,8
Services	3,9	2,0	1,4	1,1	1,8	3,7	2,3	2,4
Services, dwellings	1,8	1,4	1,7	0,9	1,0	2,0	1,3	1,4
Other services	5,8	2,5	1,2	1,3	2,4	5,1	3,0	3,3

NATIONAL ACCOUNTS FOR NORWAY

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
Gross fixed capital formation	183560	197664	44848	48579	48061	56176	46009	49888
							..	..
Buildings and structures	69516	83391	18618	20179	20944	23649	19073	19737
Oil exploration, drilling, pipelines for oil	21448	17938	3553	4473	5346	4565	4119	4924
Oil platforms etc.	26292	25911	5811	6500	5894	7707	5291	6446
Ships end boats.	6753	4929	1982	1784	-453	1616	1212	1121
Other transport equipment.	17017	17432	4511	4321	4139	4461	5355	5583
Machinery and equipment	42532	48063	10373	11322	12191	14178	10960	12077
							..	..
Agriculture	4790	5315	921	1599	1493	1302	962	1684
Forestry and logging	511	531	132	133	131	134	136	137
Fishing and fish farms	823	671	217	183	118	154	256	103
Oil activities	44856	41719	9646	10458	9808	11807	8968	10627
Crude petroleum and natural gas extraction.	45571	42059	9641	10453	10022	11942	8966	10778
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
							..	..
Manufacturing	10529	15190	2691	3711	4084	4703	3338	4106
Food products, beverages and tobacco	2607	3008	552	821	728	906	577	697
Textiles, wearing apparel and leather product.	183	176	53	44	33	47	39	41
Paper and paper products	549	1616	206	400	583	427	382	312
Printing and publishing	954	817	182	151	157	326	201	225
Petroleum refining	198	300	73	102	46	78	57	16
Basic chemicals.	1097	3073	439	869	913	852	594	557
Chemical and mineral products	924	1159	229	266	325	338	286	383
Metal products	987	1478	297	283	355	544	422	772
Machinery, ships and other transport equipm.	2079	2361	463	499	644	756	517	684
Wood products, furniture and other manuf.	951	1201	197	277	299	428	263	418
							..	..
Electricity, gas and water supply	4355	4527	776	1174	1195	1382	748	1099
Construction.	925	1136	273	290	266	306	280	309
Wholesale and retail trade	16647	19472	4647	4739	4654	5433	5143	4973
Hotels and restaurants	1687	1902	467	501	474	460	558	521
Transport via pipelines	8609	6086	766	1549	2299	1472	1224	1586
Other transport and comunications	14691	19831	4667	4530	4930	5705	5002	5330
Water transtort	5995	4608	1852	1676	-502	1582	1027	1087
Ocean transport.	5362	4043	1676	1546	-598	1419	890	994
Inland water and costal transport	633	565	176	130	96	163	137	92
Financial intermediation and insurance	3336	3870	937	974	946	1013	963	940
Dwelling service	24271	28735	6993	6966	7140	7635	6843	6829
Business activities	6664	7914	1922	2032	1935	2024	2121	2115
Other private service activities	6347	6552	1712	1619	1605	1617	1859	1680
							..	..
General government	28276	29164	6129	6342	7384	9309	6510	6708
Central government	13929	13488	2947	2905	3332	4304	3191	3053
Lokal government	14347	15676	3182	3437	4052	5005	3319	3656
							..	..
Mainland industries.	124732	145816	32759	35026	36552	41478	34928	36680

NATIONAL ACCOUNTS FOR NORWAY

Table A10. Gross fixed capital formation by type of capital goods and economic activity. Pct. change in volume from precedir

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2
Gross fixed capital formation	6,9	4,5	7,1	0,3	-0,3	10,9	-0,5	1,8
							..	..
Buildings and structures	15,3	14,2	31,8	24,4	3,3	5,4	-1,7	-6,3
Oil exploration, drilling, pipelines for oil	5,1	-17,5	-29,9	-36,8	2,5	4,9	13,3	6,2
Oil platforms etc.	-24,3	-3,9	-1,0	-23,3	-8,9	25,7	-11,3	6,9
Ships end boats.	-9,0	-33,9	-43,8	-11,7	-155,0	.	-43,4	-41,3
Other transport equipment.	61,0	0,1	2,8	1,7	2,7	-6,4	17,0	30,9
Machinery and equipment	11,9	12,7	17,8	10,6	14,7	9,3	3,9	7,6
							..	..
Agriculture	17,3	9,0	11,6	7,7	6,9	11,4	2,0	4,2
Forestry and logging	0,0	0,1	0,6	-0,1	-0,0	-0,1	-0,6	-0,4
Fishing and fish farms	59,2	-22,8	-16,8	-20,7	-27,5	-30,2	13,9	-47,5
Oil activities	-14,3	-8,9	-6,7	-23,2	-13,3	12,4	-9,6	4,6
Crude petroleum and natural gas extraction.	-11,8	-9,6	-12,2	-24,1	-10,9	13,8	-9,5	6,2
Service activities incidental to oil and gas	-212,7	-52,4	-100,6	-103,0	-520,7	.	-49,1	.
Mining and quarrying	7,1	79,0	202,9	107,2	47,3	43,6	-30,5	-47,6
							..	..
Manufacturing	8,3	40,8	42,8	58,8	38,6	29,8	19,9	9,7
Food products, beverages and tobacco	1,8	13,5	3,5	40,8	0,6	12,0	2,1	-17,3
Textiles, wearing apparel and leather product.	-6,9	-5,4	49,3	-14,7	-14,5	-23,7	-28,8	-6,7
Paper and paper products	-42,9	186,6	273,9	315,4	282,5	63,0	78,0	-24,8
Printing and publishing	21,0	-15,3	-0,4	-20,3	-39,0	-1,9	7,8	48,8
Petroleum refining	-45,0	51,0	178,5	158,0	12,2	-15,2	-24,8	-84,8
Basic chemicals.	67,5	166,6	165,9	256,2	224,1	84,0	28,5	-35,6
Chemical and mineral products	-1,8	24,1	26,5	14,4	61,5	6,0	21,7	43,7
Metal products	75,6	46,7	93,5	49,6	20,6	46,2	35,6	163,2
Machinery, ships and other transport equipm.	-5,1	12,3	14,4	2,2	5,6	26,0	9,9	37,8
Wood products, furniture and other manuf.	85,8	23,6	35,7	34,5	-6,3	42,6	30,2	50,2
							..	..
Electricity, gas and water supply	-18,0	1,5	27,4	-7,7	-2,2	1,6	-5,9	-7,3
Construction.	32,9	20,1	21,9	20,2	21,1	17,4	0,4	7,6
Wholesale and retail trade	25,1	14,8	27,4	18,9	7,6	8,6	8,0	5,2
Hotels and restaurants	12,1	9,8	16,1	22,3	0,7	2,5	15,3	2,6
Transport via pipelines	26,2	-32,0	-54,3	-56,7	-4,3	15,4	59,4	1,7
Other transport and comunications	37,3	33,1	30,0	35,2	31,6	35,5	5,2	16,0
Water transtort	-12,6	-30,6	-44,0	-8,4	-165,5	-921,1	-49,0	-39,4
Ocean transport.	-12,2	-33,0	-45,8	-6,7	-181,3	-524,0	-51,6	-39,8
Inland water and costal transport	-16,4	-10,1	-17,7	-24,2	-12,9	25,3	-25,1	-34,8
Financial intermediation and insurance	66,0	13,3	29,3	25,2	0,1	4,5	-0,1	-4,2
Dwelling service	34,9	12,7	31,6	19,4	6,1	-0,1	-6,1	-6,0
Business activities	29,8	16,1	34,7	29,2	5,8	1,8	7,1	3,2
Other private service activities	4,8	0,0	15,0	7,7	-10,5	-8,6	5,9	3,0
							..	..
General government	1,6	-0,5	3,1	3,0	5,0	-8,7	2,8	3,0
Central government	-1,5	-6,1	0,7	1,6	5,1	-20,4	4,8	2,5
Lokal government	4,7	4,9	5,6	4,2	5,0	4,7	0,9	3,4
							..	..
Mainland industries.	17,2	13,5	22,6	18,7	10,4	5,9	3,5	2,9

NATIONAL ACCOUNTS FOR NORWAY

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
Exports	334837	355041	89294	86302	88500	90945	97528	97513
							..	..
Goods	245559	267225	68084	64865	64608	69668	76297	75963
Crude oil and natural gas	106440	113231	28000	28003	26353	30875	34002	36962
Ships, new	4428	4138	546	2277	949	366	324	810
Ships, second-hand	5247	5791	1358	685	2251	1497	1504	598
Oil platforms and modules, new	11	63	12	1	46	4	11	12
Oil platforms, second-hand	850	492	27	37	254	174	36	169
Direct exports in relation to oil activities	61	97	23	24	25	25	24	27
							..	..
Other goods	128522	143413	38118	33838	34730	36727	40396	37385
Agriculture, forestry and fishing	6646	6767	1694	1658	1584	1831	1684	1804
Mining and quarrying	2331	2271	540	548	556	627	662	593
							..	..
Manufacturing products	118853	133131	35556	31390	32277	33908	37479	34773
Food products, beverages and tobacco	16473	17161	4545	3492	4283	4841	5286	4071
Textiles, wearing apparel etc.	2206	2138	616	506	489	527	546	516
Wood products	2952	3003	860	738	679	726	678	710
Paper and paper products	9290	12864	3244	2997	3298	3325	3263	2805
Printing and publishing	377	378	98	90	95	95	147	126
Refined petroleum products	13476	12988	3677	3568	3206	2537	3927	4029
Basic chemicals	10828	12019	3363	2891	3184	2581	3204	2775
Chemical and mineral products	7834	8923	2247	2266	2108	2302	2362	2300
Metal products	26241	29798	8308	7204	7053	7233	8158	7723
Machinery and transport equipment	26585	31065	7896	7027	7210	8932	9111	8995
Other manufacturing products n.e.c.	2591	2794	702	611	672	809	797	723
							..	..
Electricity	692	1244	328	242	313	361	571	215
							..	..
Services	89278	87816	21210	21437	23892	21277	21231	21550
Gross receipts from shipping	44339	44924	11392	11360	11143	11029	11381	11317
Gross receipts from oil drilling	582	624	154	158	153	159	177	177
Direct exports in relation to oil activities	1799	1155	348	269	312	226	251	252
Transport via pipelines	2065	2176	571	493	450	662	735	753
Direct purchases by non-residents	15740	15127	3300	3469	5664	2694	3177	3430
Other services	24753	23810	5445	5688	6170	6507	5510	5621

NATIONAL ACCOUNTS FOR NORWAY

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

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2
Exports	8,2	3,8	6,8	2,0	5,8	0,8	8,1	8,7
							..	..
Goods	11,1	6,1	9,6	4,6	9,8	1,2	11,5	12,1
Crude oil and natural gas	11,6	8,4	4,6	4,4	14,8	10,0	15,0	18,7
Ships, new	37,1	-7,8	-30,0	672,4	-43,1	-79,4	-41,1	-64,8
Ships, second-hand	-23,4	22,3	139,5	-42,3	225,6	-35,2	7,0	-22,5
Oil platforms and modules, new	-98,7	450,4	66,1	-67,6	.	.	-9,8	.
Oil platforms, second-hand	-20,0	-42,1	-95,8	-78,3	.	900,0	33,3	356,8
Direct exports in relation to oil activities	-13,6	59,0	21,9	26,7	125,8	106,9	1,8	7,5
							..	..
Other goods	13,1	4,1	15,1	1,1	2,1	-0,8	9,3	11,6
Agriculture, forestry and fishing	11,3	14,8	16,3	15,0	16,1	12,7	11,1	27,0
Mining and quarrying	3,5	-2,2	-0,3	-5,9	-11,8	10,2	24,0	5,9
							..	..
Manufacturing products	13,8	3,3	15,0	0,3	1,3	-2,4	8,8	11,2
Food products, beverages and tobacco	18,3	2,2	8,9	-6,2	8,1	-1,8	16,5	17,0
Textiles, wearing apparel etc.	34,6	-5,0	40,7	11,2	-22,5	-27,1	-9,2	1,0
Wood products	3,0	-4,3	11,3	-11,6	-6,6	-8,9	-11,5	5,8
Paper and paper products	14,7	4,6	22,9	3,7	-2,1	-4,3	-2,7	3,8
Printing and publishing	26,6	-15,9	0,9	-10,0	-7,5	-36,5	95,3	71,0
Refined petroleum products	26,8	-0,0	19,1	8,0	5,3	-28,8	-0,8	-1,8
Basic chemicals	6,3	-3,2	13,0	-16,7	5,2	-11,7	6,4	2,5
Chemical and mineral products	14,7	7,5	25,9	6,4	-6,0	8,1	8,5	-2,8
Metal products	9,6	-4,7	6,6	-7,1	-12,2	-5,7	2,6	12,7
Machinery and transport equipment	11,1	14,7	19,1	10,6	12,2	16,5	21,2	24,1
Other manufacturing products n.e.c.	9,7	8,1	7,4	3,7	10,5	10,3	16,2	15,0
							..	..
Electricity	-40,6	80,6	78,9	80,8	59,4	107,3	32,8	-52,8
							..	..
Services	0,6	-3,0	-1,5	-5,3	-4,3	-0,6	-2,7	-1,7
Gross receipts from shipping	-4,6	0,3	6,6	-0,4	-4,1	-0,4	-3,8	0,3
Gross receipts from oil drilling	-30,2	4,4	-1,4	1,6	11,8	6,9	13,1	10,8
Direct exports in relation to oil activities	-2,6	-32,0	-35,2	-23,1	-28,2	-40,3	-30,4	-14,5
Transport via pipelines	9,5	16,4	19,1	8,8	26,2	12,6	17,7	35,1
Direct purchases by non-residents	13,5	-5,8	3,2	-10,2	-11,9	4,8	-5,1	-3,0
Other services	4,1	-6,7	-16,6	-11,0	3,0	-1,7	0,6	-7,9

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
Imports	282104	299352	71130	73395	75114	79713	74034	74438
							..	..
Goods	197914	216841	52621	52649	51983	59588	56432	55962
Ships	7994	6324	2192	1425	761	1946	1152	485
Oil platforms and modules	253	359	52	50	78	179	33	1685
Direct imports related to other oil activitie	4108	6183	815	940	1574	2854	1944	1233
							..	..
Other goods	185559	203975	49562	50234	49570	54609	53303	52559
Agriculture, forestry and fishing	6998	7890	2168	2100	1663	1959	2302	1912
Crude oil	867	1121	326	356	270	169	218	254
Mining and quarrying	2769	2802	660	733	634	775	834	668
							..	..
Manufacturing products	174143	191914	46316	46940	46971	51687	49703	48999
Food products, beverages and tobacco	8374	8927	1874	2313	2449	2291	2163	2340
Textiles, wearing apparel etc.	15219	15201	4377	2899	4466	3459	4063	2976
Wood products	3519	3883	993	988	880	1022	947	1033
Paper and paper products	5263	6469	1608	1573	1594	1694	1693	1544
Printing and publishing	2529	2799	676	624	687	812	836	716
Refined petroleum products	8493	8747	2014	2341	2241	2151	2087	2224
Basic chemicals	8397	9449	2432	2458	2352	2207	2309	2387
Chemical and mineral products	18781	20551	4930	5195	4989	5437	5277	5508
Metal products	19703	21043	4964	5361	5008	5710	5587	5419
Machinery and transport equipment	67270	77813	18397	18796	18311	22309	20530	20046
Other manufacturing products n.e.c.	6092	6587	1594	1452	1513	2028	1686	1557
Transport equipment not produced in Norway	10503	10445	2457	2940	2481	2567	2525	3249
							..	..
Electricity	782	248	92	105	32	19	246	726
							..	..
Services	84190	82511	18509	20746	23131	20125	17602	18476
Gross expenditures for shipping	18606	19284	5000	4789	4802	4693	4753	4839
Gross expenditures for oil drilling	902	1331	238	330	430	333	362	290
Direct imports related to other oil activitie	6721	4257	674	1554	1312	717	795	729
Direct purchases abroad by residents	26206	26763	4854	6020	9388	6501	5243	6351
Other services	31755	30876	7743	8053	7199	7881	6449	6267

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

	1994	1995	95:1	95:2	95:3	95:4	96:1	96:2
Imports	6,9	5,1	4,9	3,6	4,1	7,8	3,6	1,0
							..	..
Goods	9,9	9,0	8,8	6,7	8,0	12,5	6,4	7,3
Ships	-24,7	-15,9	-28,3	-35,0	-23,3	56,4	-48,9	-69,0
Oil platforms and modules	-87,2	102,7	-43,5	18,7	.	228,6	-32,3	.
Direct imports related to other oil activitie	-32,8	45,9	-26,3	-26,6	88,0	187,8	134,7	29,7
							..	..
Other goods	15,0	9,2	12,6	9,8	7,1	7,7	7,1	4,5
Agriculture, forestry and fishing	34,6	7,0	30,3	24,9	-7,6	-11,9	3,4	-8,7
Crude oil	-17,5	32,0	48,5	66,9	30,8	-18,9	-38,7	-43,1
Mining and quarrying	-4,8	2,0	-15,0	1,2	4,5	21,5	27,3	-15,8
							..	..
Manufacturing products	14,7	9,4	12,5	9,3	7,6	8,7	7,2	4,8
Food products, beverages and tobacco	0,2	4,0	-0,0	4,5	14,5	-3,0	11,2	0,0
Textiles, wearing apparel etc	11,0	1,6	14,9	2,6	-0,4	-10,7	-9,9	0,1
Wood products	27,0	3,2	32,4	2,2	-8,8	-5,1	0,0	6,1
Paper and paper products	12,0	5,9	10,8	4,2	4,0	4,6	-1,1	0,6
Printing and publishing	3,1	7,6	4,1	8,4	0,3	16,8	14,3	5,2
Refined petroleum products	7,0	9,0	15,4	-4,5	22,0	6,4	-3,7	-10,3
Basic chemicals	15,2	8,3	15,4	2,3	5,4	11,2	9,1	1,7
Chemical and mineral products	10,6	9,9	14,9	10,3	5,8	9,1	10,6	6,9
Metal products	16,9	1,0	-6,1	6,7	-7,8	12,4	15,5	3,4
Machinery and transport equipment	16,7	17,0	21,4	15,1	17,4	15,0	10,8	8,7
Other manufacturing products n.e.c.	7,9	7,5	9,6	1,5	5,7	11,9	4,4	4,8
Transport equipment not produced in Norway	41,4	-3,8	-10,5	13,7	-10,0	-7,3	0,1	0,8
							..	..
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	-5,0	-15,1
Gross expenditures for shipping	-2,2	0,1	7,7	-2,4	-2,9	-1,5	-1,6	-1,8
Gross expenditures for oil drilling	-39,6	43,8	11,9	43,3	86,1	32,1	48,4	-15,9
Direct imports related to other oil activitie	31,7	-38,4	-44,8	-31,9	-43,9	-33,0	17,2	-53,2
Direct purchases abroad by residents	7,3	1,2	-2,5	0,8	3,9	0,8	4,0	0,1
Other services	-6,1	-5,3	-8,0	-0,8	-4,7	-7,8	-16,7	-26,7

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
Exports	334837	355041	89294	86302	88500	90945	97528	97513
Goods	245559	267225	68084	64865	64608	69668	76297	75963
Services	89278	87816	21210	21437	23892	21277	21231	21550
							..	..
Imports	282104	299352	71130	73395	75114	79713	74034	74438
Goods	197914	216841	52621	52649	51983	59588	56432	55962
Services	84190	82511	18509	20746	23131	20125	17602	18476
							..	..
External balance	52733	55689	18164	12907	13386	11232	23494	23075
							..	..
Primary income and transfers from abroad	29154	31143	7885	7186	7832	8240	8865	7669
Interest	19068	21823	5689	5134	5277	5723	5935	5171
Dividends etc.	1899	2853	530	995	758	570	1375	689
Reinvested earnings	-1095	-2179	-413	-811	-556	-399	-1204	-453
Current transfers to Norway	9282	8646	2079	1868	2353	2346	2759	2262
							..	..
Primary income and transfers to abroad	60870	58436	15028	15033	12711	15664	14107	14689
Interest	24975	24378	6876	6619	4720	6163	6035	5914
Dividends etc.	10944	11489	3934	4812	1305	1438	3176	4944
Reinvested earnings	4170	1953	-710	-1112	1934	1841	353	-1024
Current transfers from Norway	20781	20616	4928	4714	4752	6222	4543	4855
							..	..
Primary income and transfers from abroad, net	-31716	-27293	-7143	-7847	-4879	-7424	-5242	-7020
							..	..
Current external balance, net	21017	28396	11021	5060	8507	3808	18252	16055
							..	..
Revaluation	2672	10092	6613	54	-8687	12112	-1026	2825
							..	..
Total net inflow on capital transactions	-1084	-1224	-56	-79	-66	-1023	-34	-52
							..	..
Decrease in the net debt of Norway	22605	37264	17578	5035	-246	14897	17192	18828

Reconciliation due to changes in exchange rates

B-blad

Returadresse:
Statistisk sentralbyrå
Postboks 8131 Dep.
N-0033 Oslo

Statistics Norway
Sales- and subscription service
P.O. Box 8131 Dep.
N-0033 Oslo

Telephone: +47 22 00 44 80
Telefax: +47 22 86 49 76

ISBN 82-537-4262-2
ISSN 0801-8324

Statistisk sentralbyrå
Statistics Norway

9 788253 742625

Falch Hurtigtrykk, Oslo

Statistisk sentralbyrå

Economic Survey 3/96