



OECD Economic Surveys NORWAY

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OVERVIEW



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Executive summary

- *Main findings*
- *Key recommendations*

Main Findings

Norway's new government has taken over responsibility for a prosperous, well-managed economy, where people are generally "happy" - indicators of both material and non-material welfare are at high levels. Intelligent use of wealth from petroleum resources and active use of monetary policy within the flexible inflation-targeting framework have insulated Norway from the worst of the financial crisis-induced recession and supported the recovery. There are challenges in a number of areas, which are taken up in this Survey.

Monetary policy and financial stability

Flexible inflation targeting has worked well in the face of the financial turmoil of the past decade. The authorities have been rightly concerned about rising house prices and the vulnerability of highly-g geared households. Policy interest rates have been somewhat higher than would have otherwise been warranted because of this. Signs of a cooling housing market may be due to guidance on loan-to-value ratios and perhaps also to anticipation of tighter capital requirement for banks. Norway has adopted a counter-cyclical buffer, to strengthen the banking system in case of severe shocks, before others. Its operation will involve some learning by doing and, while not being concerned with fine tuning, should also give the central bank a little more room for manoeuvre in its use of policy rates.

Fiscal policy

The new government continues to follow the cross-party consensus on keeping the structural non-petroleum budget deficit to 4% of the value of the Government Pension Fund Global (GPF) over the business cycle; a structural non-petroleum deficit of around 3% of the GPF is budgeted for 2014. The real return on the assets of the GPF has often been less than 4%. Despite the benefit of petroleum revenues, overall taxation levels are quite high. A reduction in Norway's relatively high taxation, beyond the steps taken in the 2014 budget, with concomitantly lower public spending growth, could increase economic dynamism. With greater attention to prioritisation and spending efficiency, there will still be room for increasing public expenditure in some areas. Full transparency in public finances is important for maintaining consensus and effective planning.

Promoting entrepreneurship

Current prosperity has tended to disguise a slowing of underlying productivity growth. To sustain growth in living standards as petroleum production declines, a thriving culture of entrepreneurship is necessary to spot and exploit opportunities, and to raise risk-capital and other resources. Public support for innovation should be based on good framework conditions in regulatory and competition policy, with direct support being carefully managed.

Education, skills and the labour market

Education and labour market policy have important parts to play in setting the incentives for people to develop necessary skills and to participate fully in economic activity, while maintaining the cooperation and solidarity characteristic of Norway. The combination of the flat wage structure, highly subsidised tertiary education and large numbers of people taking early retirement through disability may not be appropriate for encouraging the development and effective use of those skills.

Key Recommendations

Monetary policy and financial stability

- The monetary policy stance of the central bank is appropriate. Interest rate policy needs to continue to pay attention to financial stability risks, until the developing macro-prudential tools have shown their effectiveness.
- Monitor whether the macro-prudential tightening has the intended effect on financial stability. If necessary, revise the system of indicators and decision-making processes in line with evolving experience.
- The financial vulnerabilities resulting from high household indebtedness at floating interest rates should continue to be addressed, notably by further action on prudential policy, e.g. on loan-to-value ratios and stress-testing of borrowers' debt servicing capacity.

Fiscal policy

- Aim for a gradual fall in the level of taxation, accommodating this within the fiscal guidelines by reducing the growth of public spending below that of national income.
- Improve the efficiency of public spending through more consistent assessment of value for money. Any new public body for transport investment should focus primarily on cost-efficiency in project choice, construction and maintenance.
- Within the goal of lower taxation, reduce distortions created by the tax system, notably features advantaging owner-occupied housing.
- Consider a longer term policy of keeping the non-petroleum deficit well below the 4% guideline, in view of the stronger than expected increase in the Government Pension Fund Global (GPF), uncertainties in the future rate of return on the GPF, pressure of demand in the economy, and fiscal challenges due to ageing.

Promoting entrepreneurship

- Continue to base innovation support on a competitive-bid based approach rather than automatic support. Continue to focus policy for clusters pragmatically on improving framework conditions and information flows rather than promoting clusters *per se*.
- In addition to focus on STEM (Science, Technology, Engineering and Mathematics) skills for innovation, ensure that entrepreneurial skills such as risk assessment, people management, project planning and finance are also given a place in the national skills strategy.

Education, skills and the labour market

- Continue to improve the level of training of teachers. Investigate the impact of the performance assessment and reward approach used in Oslo on educational outcomes there compared with those in the rest of the country.
- Focus more on cost-effectiveness in tertiary education, with better incentives for both students and institutions. To improve equity and strengthen the link between demand for skills and their supply, consider measures such as more guidance on course selection, better information for students on career prospects, differentiated tuition fees or differentiating (existing) grants, and penalties for excessive duration of studies.
- Lower the replacement rate for long-term sickness absence and shift some of the costs onto employers. To avoid encouraging early withdrawal from the labour market, align the rules for early retirement in the public sector with those in the private sector.

Assessment and recommendations

- *Macroeconomic prospects*
- *New Tools to complement monetary policy*
- *Evolving fiscal policy*
- *Sources of growth*
- *Innovation and entrepreneurship*
- *Human capital, education and the labour market*

Norway's economy has continued to prosper with continued growth in average incomes, low inequality, low unemployment and low inflation. Petroleum wealth has contributed to high incomes and supported the non-petroleum (mainland) economy; around 8% of mainland production is estimated to be directed towards supplying the offshore sector. At the same time, the prudent policy of saving almost all of net profits from petroleum as public sector assets has mitigated the impact of terms of trade fluctuations while building up a substantial stock of financial assets held in the Government Pension Fund Global. The value of this fund was about 200% of mainland GDP, some USD 800 billion, by the end of 2013.

Norway's early and continued recovery from the impact of the financial crisis is certainly partly due to the favourable position afforded by accumulated petroleum revenues. Therefore Norway faces few of the dilemmas that characterise macroeconomic policy in many OECD countries at the moment. Few acute difficulties appear in other policy areas, although previous Economic Surveys have highlighted relative problems, such as low cost-efficiency in education, poor work incentives in the sickness-disability system, some weaknesses in public expenditure management, and distortionary elements in the taxation of capital. Nevertheless, the new government coalition, which took over in October 2013, has signalled certain key economic issues it wishes to address (Box 1).

Box 1. The new government's policy priorities

The new government has announced its commitment to implement growth-enhancing policies, such as raising infrastructure investments and strengthening its efforts to lift productivity growth. It has also committed itself to reduce the overall tax level with an aim to encourage investment and saving and to increase labour supply.

In amendments to the 2014 budget the following challenges were noted that the government wishes to address:

- Slowing productivity growth.
- Real labour costs which are high and rising faster than productivity.
- High house prices and hence high household debt.

The government intends to keep within the budgetary guidelines on the use of petroleum revenue and the Government Pension Fund Global.

The government intends to rechannel spending of petroleum revenues towards measures that stimulate growth and production. This included a stronger prioritization of infrastructure investments as well as investments in health education and research in the amended 2014 budget.

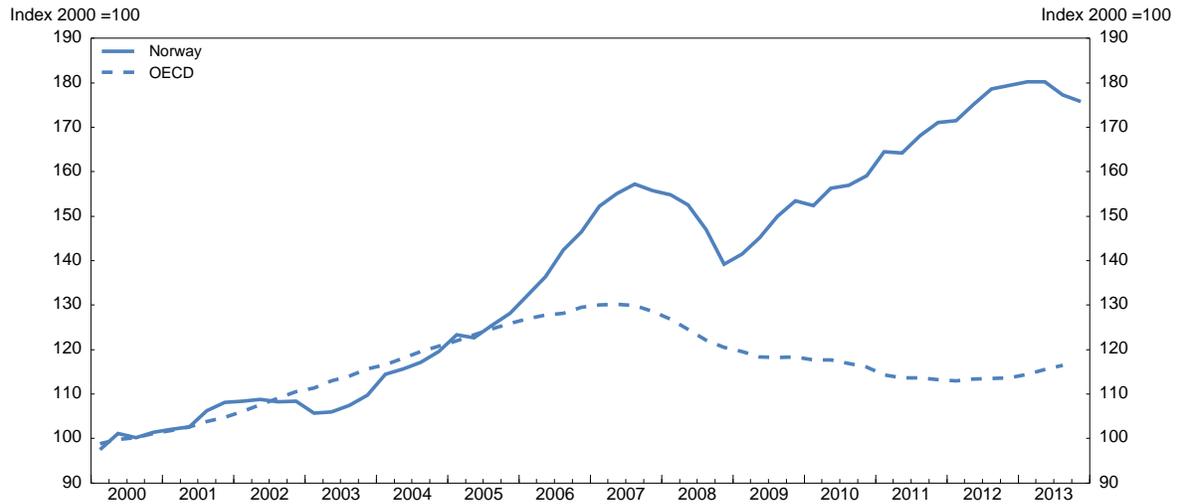
It set up a productivity commission to advice on how to strengthen productivity growth.

It is expected to aim for greater use of private sector provision of public services, e.g. in health and education.

Consumer price inflation has been low, well below the central bank's 2½ per cent target, for several years. This has justified low interest rates: the Norges Bank main policy rate has been in the range of 1.5% to 2.25% since 2010. Expectations (by the central bank but also by other forecasters, including the OECD) of accelerating inflation have generally been confounded. However, house prices have climbed well above pre-crisis levels, though they have fallen somewhat since mid-2013 (Figure 1).

Also, wage costs have steadily risen well above those in most other countries, leading to low profitability in some industries exposed to foreign trade and where productivity has not kept pace.

Figure 1. Real house prices¹

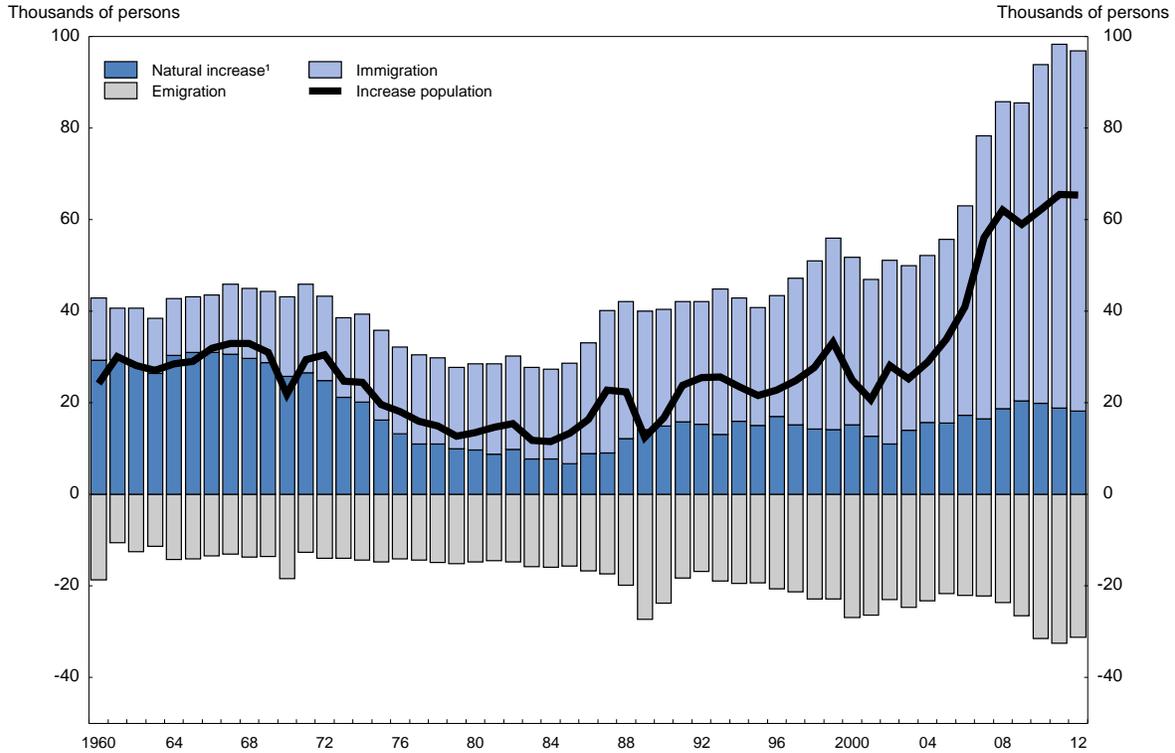


1. Adjusted by private consumption deflator.

Source: Datastream and OECD Economic Outlook Database.

High levels of demand and employment have played a role in attracting strong immigration flows. These now involve quite large numbers of people coming from central European countries, especially Poland. Since 2006, net immigration has been around twice the level of natural population increase (Figure 2). The share of the foreign born in the population has risen from relatively low levels to around the OECD average, similar to that in Germany, the United Kingdom and the United States.

Figure 2. Sources of population growth since 1960



1. Births minus deaths.

Source: Statistics Norway.

Low unemployment is one reason why immigration has been strong, as Norwegian employers face labour supply constraints. Foreign born people account for about 12% of the total population. However, average hours worked in Norway are 20% below the OECD average. Low average working hours result partly from lower typical hours and fewer people working very long hours, and partly from the widespread use of part-time working arrangements; this is partly related to high female participation and generous maternity leave. These phenomena may potentially restrict overall national income but they are mostly the result of free choice and contribute to Norway’s high ranking on “work-life balance” among indicators of well-being. Norway also ranks very highly on a number of other well-being indicators, including self-assessed “life satisfaction” and is well up the ranking even where it performs least well (Box 2).

Box 2. Well being, Norway's best and worst scores

Norway scores very highly on many of the 11 main components of the OECD's Better Life Index, whether on the more objective indicators or the subjective ones. Best scores are:

Life satisfaction, where people surveyed on average assess their overall life satisfaction as 7.7 on a scale of 0 to 10, higher than in any other country than Switzerland, just slightly above Iceland, Sweden and Denmark.

Jobs and earnings, where Norway's high employment rate, low unemployment, job security and good earnings rank it second overall, after Switzerland.

Household income, where high wages and high participation rates are more than sufficient to offset the relatively low working hours, generating adjusted household income exceeded only in the United States and Luxemburg.

Work-life balance, where the relatively large amount of time available for leisure and personal care, and the low numbers of people working long hours, give Norway a higher score than any country other than Denmark and the Netherlands, just ahead of Belgium, Spain and Sweden.

Even Norway's lowest rankings are quite good in international comparison:

On **Education**, Norway's 15 year olds perform just above the average but just below the median country. Recently, data collected under the OECD's Programme for International Assessment of Adult Competences (PIAAC), show that Norway's adults score in the top 4 to 6 countries of 24 surveyed, in reading numeracy and 'problem solving in technology-rich environments'. But on literacy, young adults in Norway perform less well than this compared with young adults elsewhere.

On **Safety** Norway has a low murder rate, higher only than Iceland and Japan, but is around the median for the assault rate. For assault, the rate of assaults on males is nearly twice that on females, a disparity larger than in all but 7 of the 36 countries surveyed.

On **Health** Norway ranks "only" 13th with life expectancy ranked 10th and self-reported health 15th.

Table 1. Well being, Norway's best and worst scores

	Life satisfaction	Jobs and earnings	Household Income	Work-life balance	Health	Safety	Education
Norway rank (among 36 countries)	2	2	3	3	13	16	17
Scores:							
Maximum	10	8.9	38 001	9.8	9.4	10	9.5
Norway	9.7	8.6	31 458	9.1	8.1	9.1	7.2
Average	6.2	6.2	23 047	7.3	6.9	8.3	6.3
Minimum	0	2.3	11 039	0	0.6	0	0.7

Source: OECD, How's Life? 2013, Measuring Well-being.

Macroeconomic prospects

The mainland economy is projected to expand robustly over the next two years, with an upturn in non-petroleum exports as the global economy gradually improves. Sustained wage and employment growth will support private consumption (Table 2). Investment in the petroleum industry has risen very strongly in recent years, but is expected to slow markedly, while housing investment will also lose momentum. Nevertheless, total investment will remain the strongest component of demand. The structural non-petroleum budget deficit is projected to remain well within the limits that require it to average no more than 4% of the value of the Government Pension Fund Global (see below Box 4). Nevertheless, growth in the value of the GPFG implies continued fiscal stimulus, as the structural non-petroleum deficit is projected to be over 5% of mainland GDP. The housing market is cooling, as shown by the fall in house prices since mid-2013. The tightening of mortgage lending conditions in 2011-12 may have influenced this.

While the short-term outlook is reasonably good, there are many risks, some domestic and some international, both on the upside and the downside. The high level of household debt means that aggregate demand is particularly sensitive to changes in interest rates, and conversely that other shocks to demand that affect household incomes could have a significant impact on the quality of banks' assets. Externally, Norway remains vulnerable to terms of trade shocks via petroleum prices. Over the past decade these have been largely favourable, leading to strong budget revenues and upward pressure on the exchange rate. In the future, strong growth in world demand, especially in the leading emerging market economies, may generate further price increases, while supply shocks such as the development of shale gas and other unconventional fossil fuels could lead to price falls, as could success in moving towards the zero carbon emission economy needed if global warming is to be substantially mitigated. The growth of the GPFG renders the budgetary position less sensitive to petroleum prices but increases exposure to world financial market fluctuations, whether positive, as in 2013, or severely negative, as in 2008.

Facing these risks, Norway has a well-developed set of policy tools. Monetary policy has room to act on both deflationary and inflationary risks, while the floating exchange rate gives automatic compensation for some external shocks. On the fiscal side the automatic fiscal stabilisers are quite powerful, and the government has the ability to make quite rapid discretionary fiscal policy changes to supplement these tools if necessary, as in 2009.

Table 2. Macroeconomic indicators and projections

Annual percentage change, volume (2011 prices)

	2011 Current prices (billion NOK)	2012	2013	2014	2015
GDP	2 751	2.9	0.6	2.1	2.5
Mainland GDP	2 075	3.4	2.0	2.5	2.9
Private consumption	1 130	3.0	2.1	2.4	3.3
Government consumption	592	1.8	1.6	3.2	2.7
Gross fixed capital formation	539	8.3	8.7	3.3	3.6
Housing	121	7.3	6.4	2.0	1.2
Business	332	10.8	9.4	4.0	3.5
Government	86	-0.4	9.5	1.8	7.3
Final domestic demand	2 262	3.9	3.6	2.8	3.2
Stockbuilding ¹		-0.1	0.0	0.0	0.0
Total domestic demand	2 376	3.6	3.4	2.6	3.1
Exports of goods and services	1 154	1.1	-3.9	1.5	1.8
of which crude oil and natural gas ²	568	0.7
Imports of goods and services	779	2.3	2.5	2.6	3.5
Net exports ¹		-0.2	-2.3	-0.2	-0.3
Other indicators (growth rates, unless specified)					
Potential GDP	..	2.3	2.6	2.8	2.9
Output gap ³	..	-0.3	-0.9	-1.2	-1.2
Employment	..	2.0	0.7	1.1	1.3
Unemployment rate	..	3.1	3.5	3.6	3.6
GDP deflator	..	2.8	2.6	2.8	2.6
Consumer price index	..	0.7	2.1	2.1	2.1
Core consumer prices	..	1.6	1.5	1.9	2.0
Household saving ratio, net ⁴	..	8.1	8.7	9.1	9.1
Current account balance ⁵	..	14.5	10.8	10.8	10.9
General government financial balance ⁵	..	13.9	11.1	10.7	10.2
Government Pension Fund Global ^{6,8}	..	173.8	209.9
General government net debt ⁵	..	-167.5	-185.9	-188.2	-189.7
Non-oil balance ^{6,8}	..	-4.6	-5.0	-5.7	..
Structural non-oil balance ^{7,8}	..	-4.7	-5.2	-5.7	..
Structural non-oil balance (% GPFG) ^{7,8}	..	-3.1	-3.2	-2.9	..
Three-month money market rate, average	..	2.2	1.8	1.8	1.9
Ten-year government bond yield, average	..	2.1	2.6	2.9	3.1
Memorandum items					
Non-mainland GDP (petroleum and shipping)	676	1.3	-3.5	0.6	0.9

Note: These projections are a partial update of OECD Economic Outlook No. 94 from November 2013. Full forecasts will be published in Economic Outlook No. 95 in May 2014.

1. Contribution to changes in real GDP.

2. Statistics Norway.

3. As a percentage of potential GDP.

4. As a percentage of household disposable income.

5. As a percentage of GDP.

6. As a percentage of mainland GDP.

7. As a percentage of trend mainland GDP.

8. Ministry of Finance calculations and projections.

Source: Ministry of Finance and OECD Economic Outlook 94 database, revised to take account of data released in early 2014.

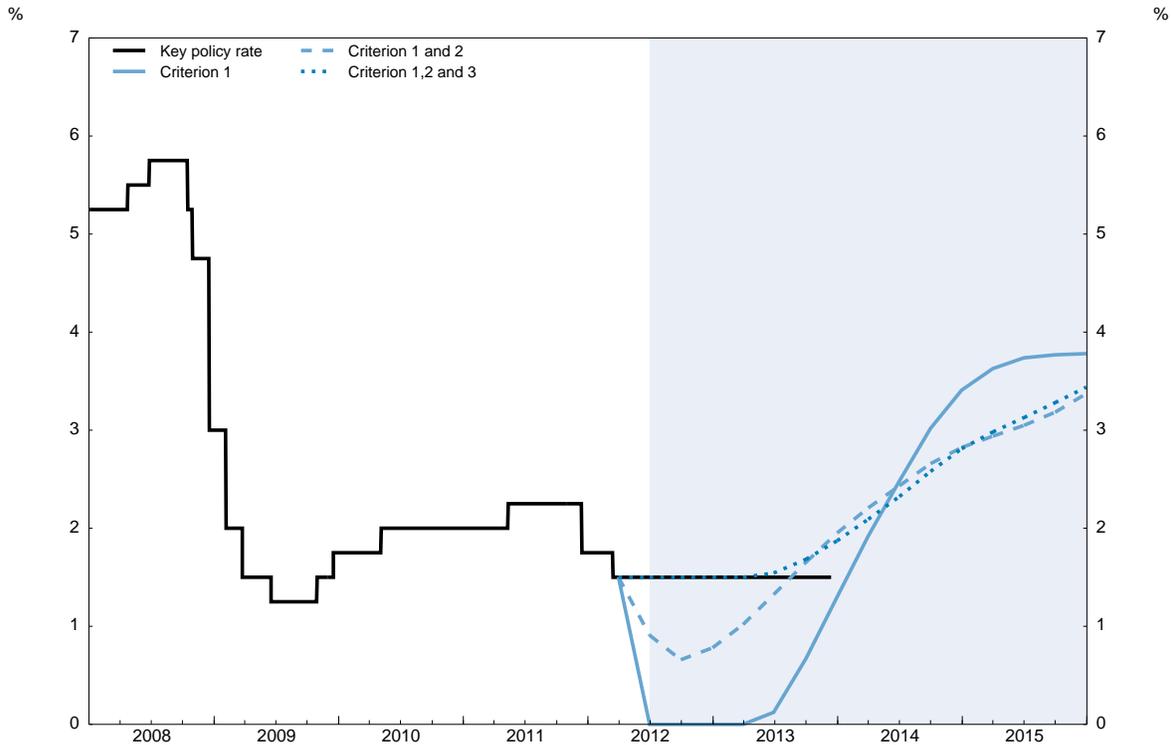
New tools to complement monetary policy

The flexible inflation targeting approach to monetary policy presents the authorities with a challenge, as domestic interest rates can have an uncertain effect on the exchange rate, depending on external factors – notably petroleum prices and interest rates in other countries. Norges Bank has maintained its policy interest rate at low levels since the onset of the financial crisis, currently at 1.5% since March 2012. Consumer price inflation had been well below the central bank’s 2.5% guideline for several years, which justifies the low interest rates. On the other hand, such low interest rates have encouraged the real-estate boom. House prices had increased at a faster pace than disposable income for several years, which has been associated with strong credit growth. Household indebtedness is twice disposable income on average and almost exclusively at floating interest rates.

The primary objective of monetary policy is low and stable inflation. Norges Bank’s inflation targeting approach takes account of financial stability concerns alongside traditional objectives; this was made more explicit in 2012. The central bank considers that low interest rates kept for an extended period may lead to financial imbalances (Norges Bank, 2012a; Olsen, 2013a, 2013b). As a result, the policy interest rate has been higher than what inflation and the output gap alone would have implied (Figure 3). There is some risk in gearing monetary policy to financial stability, since it could interfere with the primary inflation objective (Gelain *et al.*, 2012). Although this has not been a major problem in Norway to date, in general, more policy instruments are required to achieve different objectives at the same time (Olsen, 2013a, 2013b).

Figure 3. Appropriate interest rate path according to different criteria

As predicted in March 2012



1. Criterion 1: set the interest rate with a view to stabilising inflation at target or bringing it back to target after a deviation has occurred.
2. Criterion 2: set the interest rate path to provide a reasonable balance between the path for inflation and the path for overall capacity utilisation in the economy.
3. Criterion 3: set the interest rate so that monetary policy mitigates the risk of a build-up of financial imbalances, and so that acceptable developments in inflation and output are also likely for a range of different economic outcomes.

Source: Norges Bank.

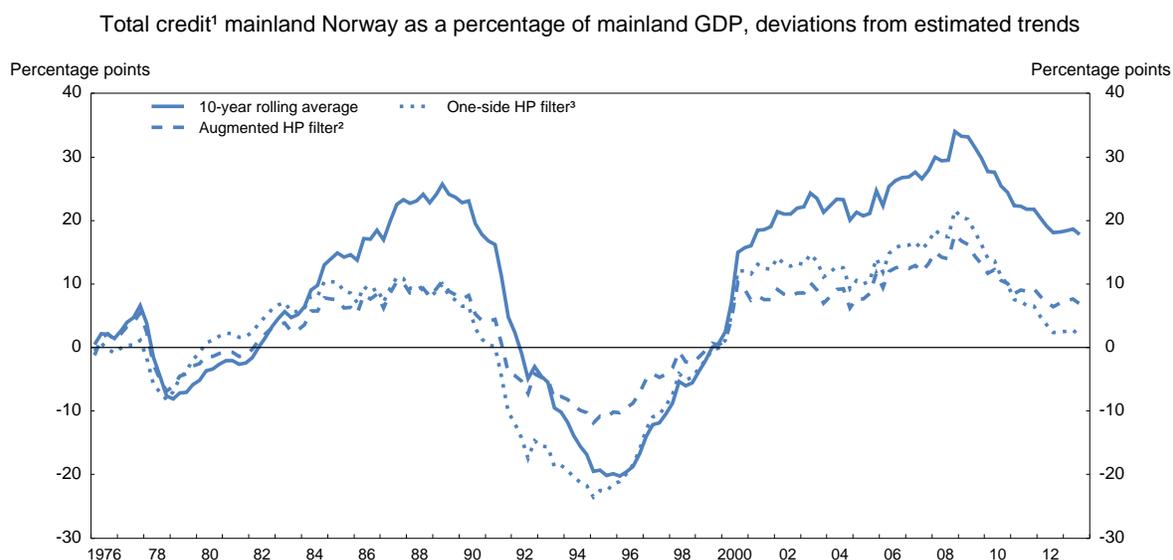
One such tool is a counter-cyclical buffer in the bank capital requirements regulations, as required by Basel III and the EU Capital Requirements Directive IV (CRD IV). In December 2013, Norway became the second country (after Switzerland) to introduce a buffer, at a level of 1% of risk-weighted assets and with effect from July 2015. If the capital ratio falls below the required total level, the authorities will be able to impose constraints on banks' behaviour, notably restricting dividend payments and employee remuneration. In a strong downturn the authorities could remove the counter-cyclical buffer requirement or reduce its level, to mitigate pro-cyclical effects of tighter credit conditions.

The Finance Ministry makes decisions on the level of the counter-cyclical buffer every quarter, based on advice given by Norges Bank; this advice is published, once

the decision has been made. The central bank's advice is informed by an analysis of four indicators: the ratio of credit to GDP, the ratio of house prices to household disposable income, commercial property prices and the wholesaling funding ratios of Norwegian credit institutions; both the levels and deviations from estimated trends of these indicators are taken into account. This is a somewhat more developed approach than an initial proposal from the Bank for International Settlements to use just the credit-to-GDP ratio. The indicators can be quite sensitive to the estimation method used for the trend, however (as Figure 4 shows for one of the indicators). The recent increase in mortgage lending rates and spreads to funding costs may reflect banks anticipating these higher capital requirements, in addition to the effect of increases in the normal capital requirements under CRD IV and action on mortgage loan-to-value ratios.

This allocation of decision-making responsibility seems to suit the existing Norwegian institutional arrangements regarding financial stability. Other countries may choose different arrangements, for example giving more responsibility to the central bank or other independent institution. This setup, and the indicators used, are new in all countries and may be subject to modification in the light of experience.

Figure 4. Credit indicator of financial imbalances



1. Sum of non-financial corporations in Mainland Norway (total economy pre-1995) and households.
2. One-sided Hodrick-Prescott filter augmented with a simple projection. Lambda = 400 000.
3. One-sided Hodrick-Prescott filter. Lambda = 400 000.

Source: Norges Bank, Monetary Policy Report 04/13.

Relatively favourable conditions on home mortgage loans may persist, however. With CRD IV having entered into force in July 2013, the required common equity tier 1 ratio is currently at 9% and will be gradually increased to 12% (10% for banks not deemed to be systemically important) as of 2016 (the countercyclical buffer is

additional to this). In general, a higher capital requirement is expected to increase lending rates and to constrain activity. Its effect seems to be somewhat weaker in Norway (BCBS, 2010; Akram, 2012), perhaps because of low risk-weights on home mortgage loans by large banks using the internal rating based (IRB) approach. In practice, transitional provisions (the “Basle I floor”) keep mortgage risk weights well above the 10% to 13% range that IRB models can produce. In October 2013, the Ministry of Finance took action which will increase IRB-calculated risk-weights on mortgage loans to 20% on average for the IRB banks.

A different type of challenge may emerge in the future if inflation picks up and interest rates rise. Currently, around 7% of households spend more than 20% of income on interest payments. According to *Finanstilsynet*, the financial supervisory authority, an increase of the mortgage lending rate to around 6½ per cent (in 2012 Norges Bank’s assessment was that the normal level of the key policy rate to be around 4% for the next few years [Norges Bank, 2012b]), this share would rise to 20% of the total (Finanstilsynet, 2013). This could be a drag on household demand and on growth. The unwinding of household debt, which tends to occur once property prices peak, may also restrain growth. Statistics Norway’s models indicate that a larger shock, a rise in the policy rate of 5 percentage points, would reduce GDP by around 5% - assuming no negative feedback loop via troubled banks.

The Norwegian banking system is closely interconnected with other Nordic countries. Through the EEA, some EU policies apply, such as any future directive on recovery and resolution, but the Single Resolution Mechanism currently under discussion would not, for example. The interconnectedness underlines the continuing importance of close cooperation among Nordic bank policies.

Summary of recommendations on monetary policy and financial stability

- The monetary policy stance of the central bank is appropriate. Interest rate policy needs to continue to pay attention to financial stability risks, until the developing macro-prudential tools have shown their effectiveness.
- Monitor whether the macro-prudential tightening has the intended effect on financial stability. If necessary, revise the system of indicators and decision-making processes in line with evolving experience.
- The financial vulnerabilities resulting from high household indebtedness at floating interest rates should continue to be addressed, notably by further action on prudential policy, e.g. on loan-to-value ratios and stress-testing of borrowers’ debt servicing capacity.

Evolving fiscal policy

Norway’s fiscal position is enviable. Revenues from petroleum production have averaged around 17% of mainland GDP (about 14% of total GDP) over the period 2001-13. They are quite variable: over the same period the average absolute change from one year to the next has been over 3% of mainland GDP and the standard deviation of the actual change over 4%. Such high and variable revenues can pose a

challenge to budgetary policy and macroeconomic management, the “resource curse”, which Norway has dealt with rather successfully through the operation of the Government Pension Fund Global (GPF) and associated fiscal guidelines (Box 3).

Box 3. The Norwegian macroeconomic policy framework

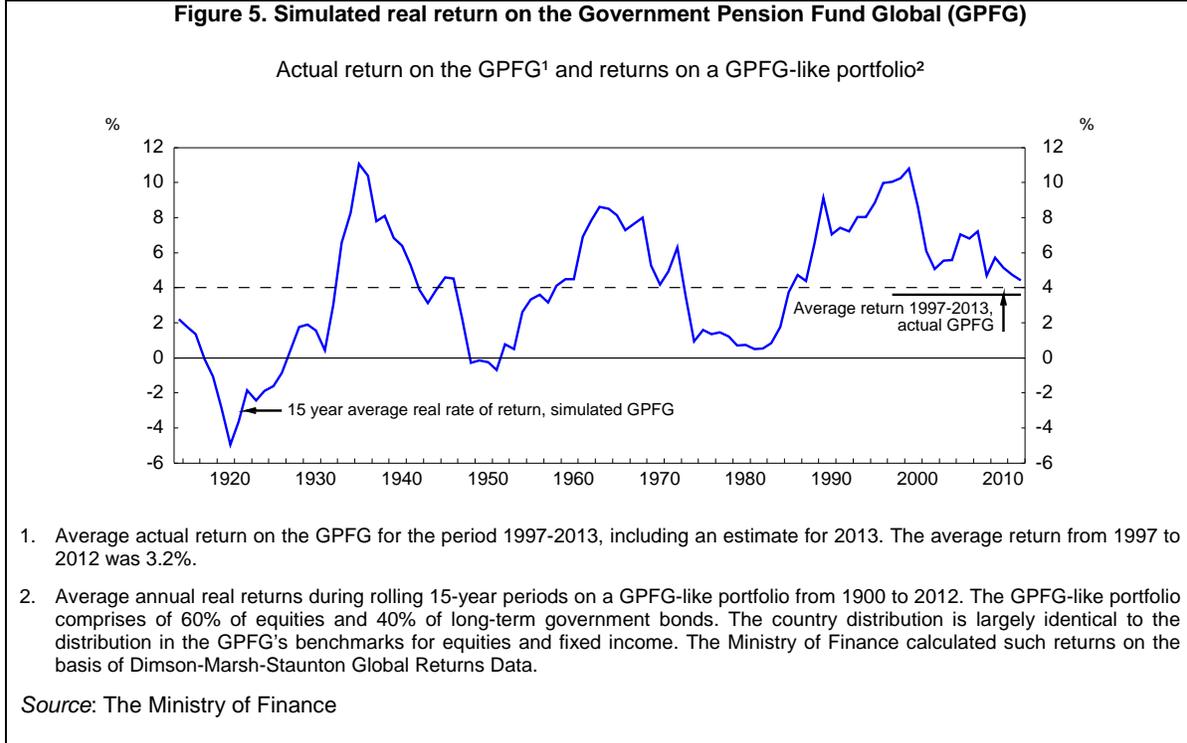
Fiscal policy works within a set of guidelines on the use of revenue from oil and gas production. The guidelines have two parts, a rule on the use of annual petroleum revenues and a rule on the use of the accumulated stock of revenue:

- All government revenues from oil and gas production, whether through taxation or ownership, less investment costs, are paid into a fund, initially called the Government Petroleum Fund but now known as the Government Pension Fund Global (GPF). The GPF invests exclusively in assets outside Norway. By the end of 2013, accumulated assets in the GPF were valued at around NOK 5 000 billion (about USD 800 billion), more than 200% of mainland GDP. Investment guidelines are that 60% of the fund should be held in equities, 35-40% in fixed-income securities and up to 5% in real estate.
- The so-called 4% rule stipulates that the structural mainland budget deficit (*i.e.* the central government deficit excluding petroleum revenues and adjusted for the cyclical position of the economy excluding petroleum and shipping) should, over time, be equivalent to 4% of the value of the GPF at the end of the year prior to the budget year

The figure of 4% was chosen because it was estimated that this was the long run real rate of return the fund could expect. The average return since 1997 up to late 2013 has been about 3% per cent. A simulation of the fund’s value over the previous century shows that 15 year rolling average returns would have varied between zero and 10%, with an average of 4.8% (Ministry of Finance (2012); Figure 5).

A non-petroleum structural deficit equal to 4% of the GPF is not a target for any particular year, the government is free to deviate from it in various circumstances, notably when discretionary fiscal action seems necessary, or when the value of the GPF changes erratically or very rapidly. Although one of the aims of the GPF is to preserve petroleum wealth for future generations, the guidelines do not explicitly require that cumulated deviations of the structural deficit from the 4% value should be zero. Use of the phrase “the 4% rule” or “4% guideline” in the text of this report encompasses both the 4% rule as outlined above and the underlying rule allocating all current petroleum revenue to the GPF.

Figure 5. Simulated real return on the Government Pension Fund Global (GPFG)

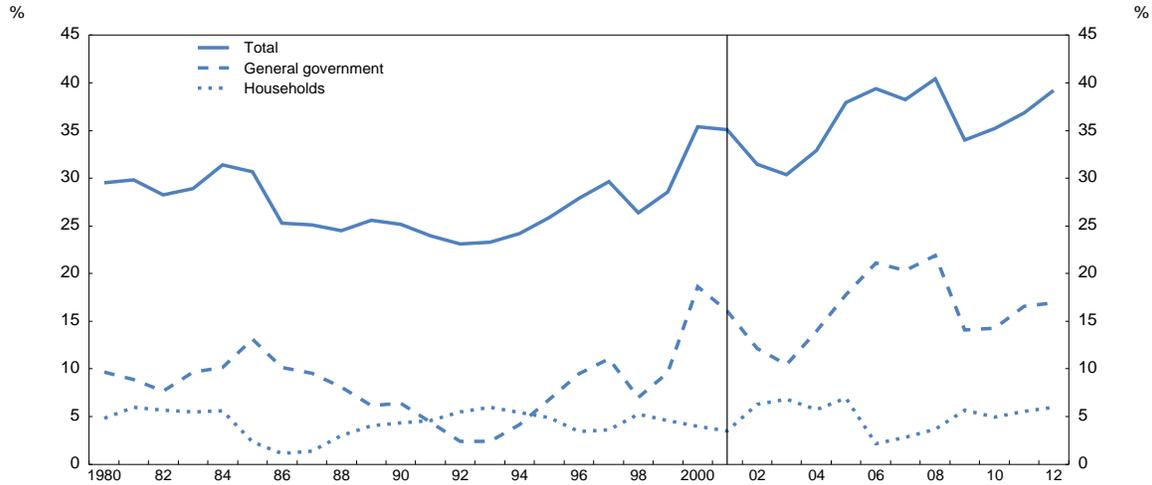


This strategy has insulated the budget, and to a considerable extent the economy as a whole, from these revenue fluctuations while allowing the underlying impact on fiscal policy to build up gradually over the years. The impact of this policy can be seen in its effect on national saving. Since the late 1990s, the national saving rate (measured with respect to total GDP, not only mainland) has risen by around 10 percentage points, almost entirely as a result of increased government saving (Figure 6).

By 2014, 4% of the GPFG will be equivalent to around 8% of mainland GDP. On current budgetary plans, policy will be significantly tighter than this, with a structural non-petroleum deficit more like 5¾ per cent of mainland GDP.

Figure 6. Saving rates by sector

As a percentage of total GDP



Source: OECD, Annual National Accounts Database.

In the fiscal rule, the figure of 4% was chosen as a plausible value for the long run real rate of return that could be expected from the GPFG. In that way, the real value of the wealth represented by non-renewable resources of oil and gas in the ground would be converted into financial wealth. The actual real rate of return has varied considerably, and therefore future returns are highly uncertain. To ensure preservation of the wealth-conserving properties of the fiscal rule, it might therefore be prudent to reduce the assumed real rate of return below the current 4%, but there are dangers in opening up the issue of the assumed rate of return, unless there is a consistent divergence over a long period. Nevertheless, given the rapid recent rise in the size of the fund, the current policy of keeping the deficit well within the limit implied by the 4% rule is appropriate because it represents a cautious approach to both issues - preserving the value of the fund and avoiding excessive growth in aggregate demand.

As a percentage of mainland GDP, total general government non-petroleum revenue in Norway is, along with that of Denmark, now the highest in the OECD (Figure 7). Even excluding GPFG revenues (equivalent to over 5% of mainland GDP), which are not a burden on the mainland economy, the share is still the 7th highest in the OECD. Under the previous government's policy of maintaining the average level of taxation unchanged, rising GPFG revenue has been used to fund increasing levels of public expenditure. This keeps the burden of taxation at relatively high levels, likely to induce distortions and inefficiencies in private sector behaviour. Levels of taxation could be reduced over time, especially if public spending efficiency were improved. Stronger impact evaluations and cost-benefit analyses could help raise efficiency. The new government is considering establishing an independent efficiency unit for the public sector with a remit to audit cost-benefit analyses, to secure good quality and consistent practice. The previous Economic Survey (OECD,

2012) suggested creating a more powerful cross-ministry agency for monitoring such impact evaluations and cost benefit analyses, in a chapter on public expenditure management.

Previous Economic Surveys have also suggested that there is room for more private provision of public services, even in areas such as health and education where services are provided free of charge. Competition on the basis of cost, with safeguards for maintaining service quality, can produce efficiency gains. Many services are provided at local or county level, and the KOSTRA system for monitoring spending can form the basis for cost comparisons in a lot of areas. The new government has indeed announced that it intends to pursue the idea of increased private sector participation. The free provision of tertiary education, along with grants for student living costs, has led to a growth in the number of local colleges, who aspire to university status. The low apparent rate of return to tertiary education in Norway may suggest that cost and quality control here are very important, although the relatively low premium to earnings associated with additional education may well reflect egalitarian labour market conventions rather than a human capital effect.

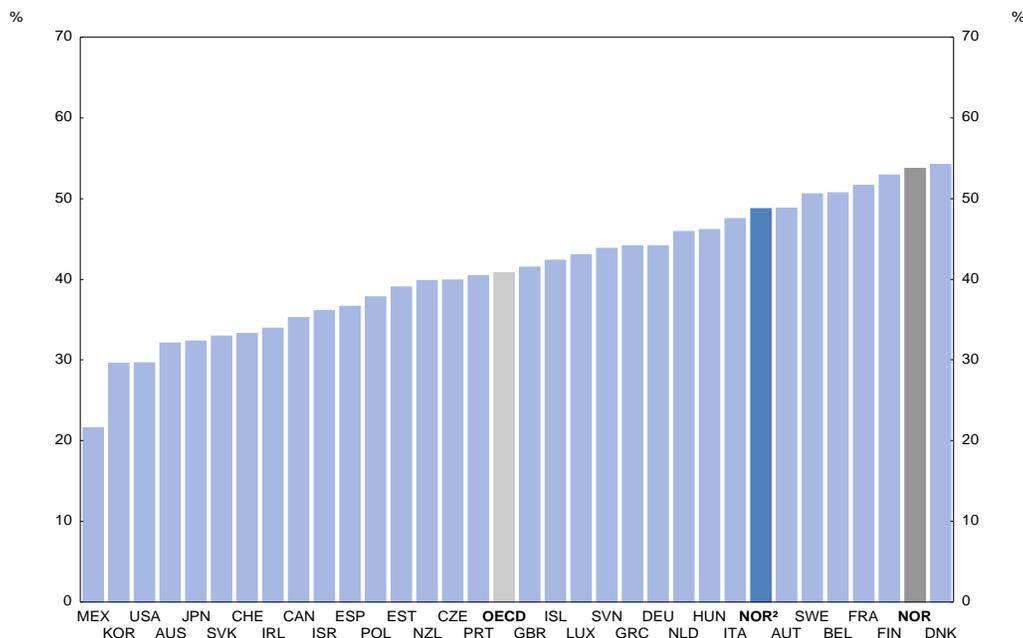
In one important and sometimes controversial area, road planning and construction, the government has also announced that it may set up a new public body to manage national road building programmes and perhaps expand the role of public-private partnerships (PPP), though not many details are available. It is important to bear in mind that the efficiency gains from PPP lie in project planning and cost management, not in financing. An appropriate balance between risk and reward is also important – if the private side of the partnership bears no risk, it should not be remunerated as if it does. Where public money or contingent liabilities are involved, projects should be exposed to public scrutiny - audits, cost-benefit analysis and so on - just like any other public spending programme. The new body could potentially be classified as part of the private sector, depending on the share of income from “market” sources (which can include publicly enforced toll revenue). But through its borrowing and likely implicit government guarantees, there may be contingent liabilities for the government; if they are not included in national accounts definitions of general government budgets, these should be explicitly recorded in annexes to the public accounts.

The new government has also made a start on tax reduction, reducing income tax by one percentage point, reducing the wealth tax (from 1.1% to 1.0%) and abolishing inheritance taxation in the revised 2014 budget. This starts to address another problem raised in the chapter on capital taxation in the previous Economic Survey, where it was shown that income from some forms of saving faces effective tax rates of over 100% when income tax, wealth tax and inflation are taken into account.

The Norwegian tax system is relatively free of distortions, apart the area of capital taxation (OECD, 2012; Denk, 2012). The system has fewer special rates and exemptions than many other tax systems, though it is always worth checking to see that these address a real need rather than a sectional interest. For example, the comparatively high standard rate of value added tax, 25%, could be reduced if other

lower rates, such as on food and some transport, or exemptions were abolished. The mandate of the recently appointed tax commission, which is due to report in late 2014, is mainly the important issue of the vulnerability of the corporate tax system to international tax shifting; the 2014 budget took some steps to limit interest deductibility in this context. The new government has suggested setting up a green tax commission, which could for example examine the issue of inefficient multiple rates in the carbon tax, as well as the possibilities for increasing or refining environmental taxation. It has already acted in one area, by increasing the carbon tax on some previously low-tax sectors. Other taxation issues such as housing and wealth taxation, as identified in previous OECD Economic Surveys, could be considered subsequently.

Figure 7. General government total¹ revenue
As a percentage of GDP



Note: Data for Norway refer to mainland. The OECD area is the simple average of the countries for which data are available (using Norway figures excluding GPFG).

1. Excluding interest income.
2. Excluding revenue from the Government Pension Fund Global.

Source: OECD Economic Outlook 94 database.

Summary of recommendations on fiscal policy

- Aim for a gradual fall in the level of taxation, accommodating this within the fiscal guidelines by reducing the growth of public spending below that of national income.
- Improve the efficiency of public spending through more consistent assessment of value for money. Any new public body for transport investment should focus primarily on cost-efficiency in project choice, construction and maintenance.
- Within the goal of lower taxation, reduce distortions created by the tax system, notably features advantaging owner-occupied housing.
- Consider a longer term policy of keeping the non-petroleum deficit well below the 4% guideline, in view of the stronger than expected increase in the Government Pension Fund Global (GPF), uncertainties in the future rate of return on the GPF, pressure of demand in the economy, and fiscal challenges due to ageing.

Sources of growth

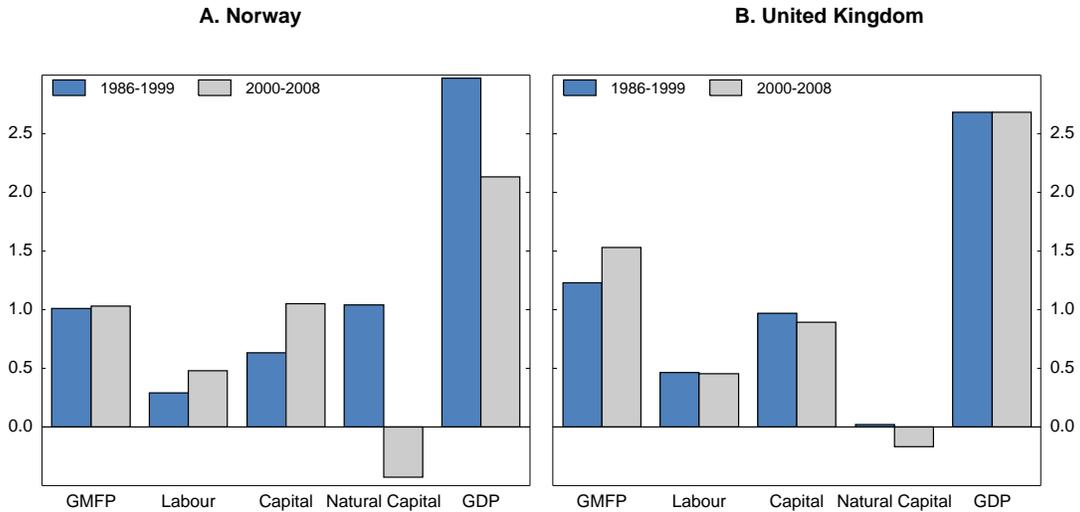
The exploitation of natural resources has been one of the most important factors in understanding developments in the Norwegian economy over the past three decades. “Growth accounting” exercises traditionally calculate how growth in national income is composed of growth in labour and capital resources employed and underlying productivity growth, often referred to as total or multi-factor productivity growth. Recent OECD work provides an interesting perspective on this by treating use of natural resources as an additional factor of production, alongside capital and labour, as sources of GDP growth in such a growth accounting exercise (Brandt *et al*, 2013).

From the mid-1980s to 2000 the growth contribution of natural capital was relatively large in Norway and turned negative thereafter, as oil reserves started to diminish (Figure 8). Although the growth contribution of other factors of production increased a little, GDP growth declined almost in tandem with the growth contribution of natural capital, as estimated growth in generalised multi-factor productivity (GMFP) was almost unchanged.

This decline in GDP growth can, in fact, be entirely attributed to declining oil and gas production. GDP growth in mainland Norway, which excludes the offshore gas and oil sectors, even increased a bit across these two periods. Still, one interpretation of the picture shown in Figure 8 would be that during times of resource abundance Norway did not invest sufficiently in other forms of wealth, such as human or physical capital, to maintain its ability to generate similar increases in income when resource use is declining. Promoting innovation and entrepreneurship could help to attain higher productivity growth to make up for the vanishing growth contribution of gas and oil. The United Kingdom seems to have been able to maintain GDP growth across the two periods; however, the drop in the contribution of natural capital was much smaller.

Figure 8. Contribution to GDP growth

Contributions to period average growth



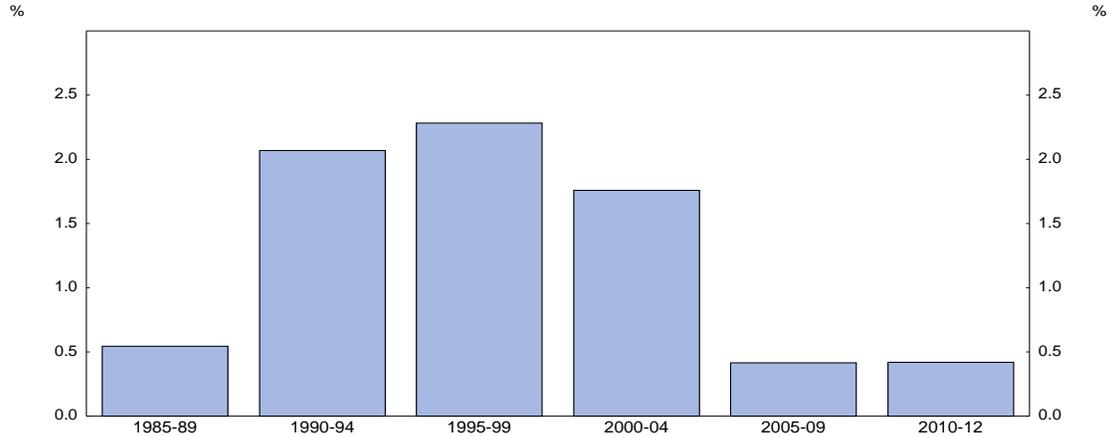
Note: GMFP: Generalised multi-factor productivity.

Source: Brandt *et al.* (2013).

The decline in overall GDP growth in the decade after the 1990s due to reduced growth in petroleum production was partly offset by some increase in labour and capital input, while underlying multi-factor productivity growth assessed in Brandt *et al* (2013) was little changed. Developments since the period 2000-08 analysed suggest a somewhat more pessimistic picture. Underlying productivity growth in the mainland economy (which should be much less affected, if at all, by the decline in extraction of petroleum, most of which is exported) declined after the 1990s. Its decline appeared to continue through the recession and picked up only a little in the subsequent recovery (Figure 9).

Figure 9. Slowing underlying productivity growth

Total factor productivity, average annual change, mainland



Source: OECD Economic Outlook 94 Database.

There is thus a risk that, beyond the cyclical recovery, future growth rates will be lower than those to which Norway has been accustomed, even in the mainland economy. The earlier period, in addition to being one in which the use of non-renewable resources was accelerating, was also one in which structural reform policy was more active than in the last decade; significant reforms occurred in taxation and retail regulation in the 1990s, for example. Resources in the GPFG will continue to grow (though at a diminishing rate) but this would not make up for a shortfall in underlying productivity growth. Productivity growth depends on innovation, which can arise from adopting better technologies or new products from abroad, from research and development (R&D) activity in Norway to develop home-grown improvements, as well as in less obvious ways such as organisational innovation, including just better use of new technologies in existing activities.

The government has set up a commission on productivity to investigate these issues. Previous OECD *Economic Surveys* have emphasised the importance of policies to maintain competition and an open economy. While in many areas, regulatory indicators show that Norway performs well, they also suggest that there are barriers to competition in some service industries. There is also evidence of significant potential to raise productivity in public services such as education and hospitals. State-owned companies play a large role in the economy, potentially a source of inefficiency, although arms-length governance arrangements for such companies prevail in Norway. In addition, innovation-specific support policies need to adapt to the changing technological environment.

Innovation and entrepreneurship

Norway has a set of innovation policies in place which have been partly based on technology- and industry-neutral subsidies to R&D or innovation investment, with projects requiring approval from the Research Council of Norway (RCN). The main

programme, *Skattefunn*, operates through a tax credit scheme (though it is essentially a grant since if the tax credit exceeds the tax liability, the difference is paid as a grant), and is potentially open-ended as there is no fixed budgetary limit once the RCN approves the scheme. However, for each company there is a ceiling on R&D spending that is eligible for the tax credit (this ceiling was substantially increased in the 2014 budget, after several years without change). Smaller programmes for R&D grants operate on the basis of competition for a fixed budget of grants, based on a ranking by the RCN of the various potential projects.

Some other support programmes are more closely tied to specific industries. Agriculture is a declining industry in relative terms and its contribution to GDP is now exceeded by fish farming, an industry that grew up largely spontaneously. Support to agriculture is delivered through very high implicit subsidies from price support and import restrictions (such as a 277% tariff imposed on certain cheese at the beginning of 2013). Agriculture also benefits from a special programme by Innovation Norway, an agency of the Ministry of Industry. On the other hand, newer industries also receive special attention, especially if related to renewable energy and energy saving, for which separate funding, not overseen by Innovation Norway, has been set up. The system of support for R&D is moving away from technological and industry neutrality to a more targeted approach.

In addition to targeting R&D activity in various ways, policy has also been concerned about human capital. The proportion of students studying STEM (Science, Technology, Engineering and Mathematics) subjects is relatively low in Norway: just over 1% of Norwegian employees aged 25-34 have such a degree, compared with an OECD average of about 2%. The authorities have looked for ways to encourage young people to take up such courses and to make them more relevant by encouraging university-industry links. But starting salaries for graduates in STEM disciplines are not much above average – the issue may be as much the demand for STEM skills by employers as the supply of those skills. From this point of view an essential set of people are entrepreneurs.

Definitions of entrepreneur often seem indistinguishable from that of innovator, as they are likely to have many attributes in common (Table 3). There are perhaps two key functions of entrepreneurs that innovators do not necessarily need. One is the organisational role, bringing together different kinds of people as well as material and financial resources, and making them work effectively together. The other is taking financial risk. Innovators may undertake either of these activities, entrepreneurs certainly do.

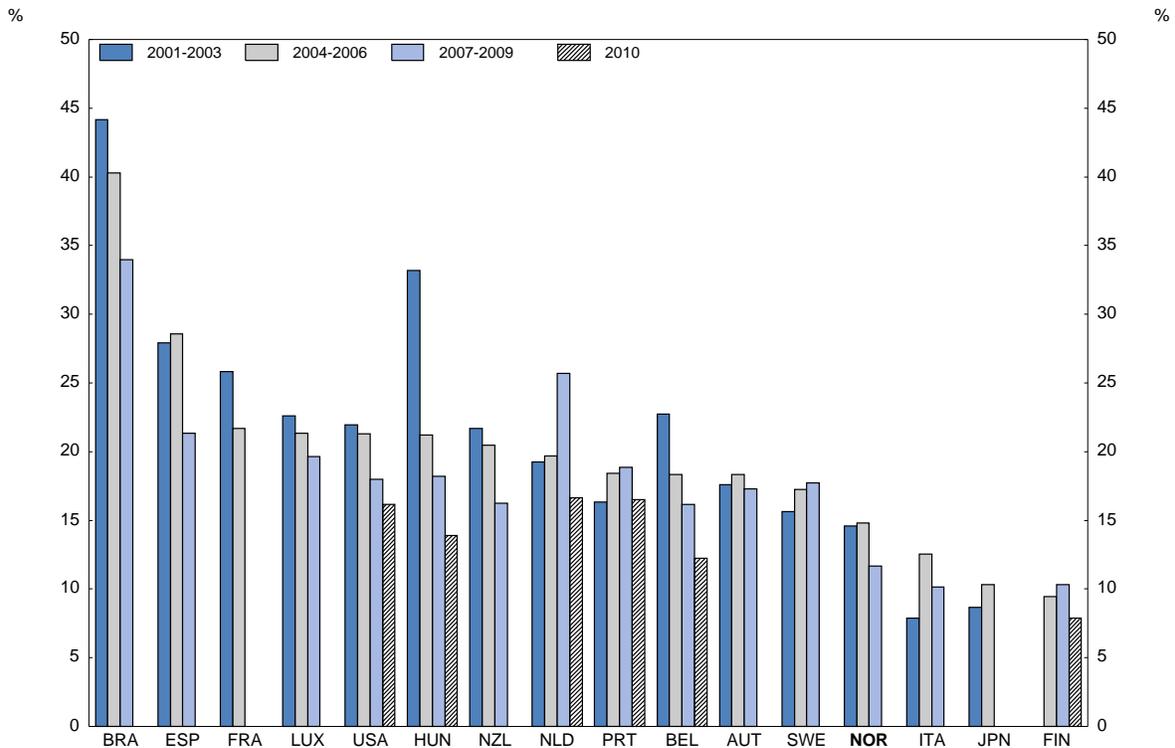
Table 3. Innovator or Entrepreneur?

	Innovators	Entrepreneurs
Innovate	Yes	Maybe
Invest	Maybe	Yes
Employ	Maybe	Yes
Manage	No	Yes
Deal with public administration	Maybe	Yes
R&D sponsor	No	Maybe
conduct	Likely	No
Risk own cash	Maybe	Yes
Risk other	Yes (time, status...)	Maybe
Key skills, (relative to typical salaried employee)	Technical	Managerial, financial, vision
Contribution	New products, techniques	More, better, or lower-cost, production

Entrepreneurs do not necessarily have to innovate, in the commonly used sense of the word, to be useful. Setting up a new company, or expanding an existing one, to provide similar goods and services to those that already exist and using similar production techniques is not innovation. But if it increases competition in existing markets or serves new domestic or export markets, it can contribute to increasing national income. The contribution of entrepreneurs to innovation, increasing the underlying productivity growth discussed earlier, may come in many ways, for example through directly spotting innovative projects that need someone to organise and finance them, or by employing the kind of people likely to spot new opportunities in existing businesses. Such people may or may not be STEM graduates.

A widespread measure of the degree of entrepreneurship is the rate of new firm creation, where Norway seems to lag (Figure 10). Another international comparison, based on surveys of individuals, suggests that Norwegians generally see that there are plenty of opportunities for entrepreneurship in Norway, but by comparison with other countries only a relatively small proportion of Norwegians feel they are equipped with the skills that entrepreneurs need (GEM, 2011).

Figure 10. Norway has a lower start-up rate than many countries



Note: The graph reports country averages in start-up rates (defined as the fraction of start-ups among all firms) across the indicated three-year periods. Start-up firms are those firms which are from 0 to 2 years old. The period covered is 2001-11 for Austria, Belgium, Finland, Hungary, the Netherlands, Norway, and the United States; 2001-10 for Brazil, Spain, Italy, Luxembourg and Sweden; 2001-09 for Japan and New Zealand; 2001-07 for France; and 2006-11 for Portugal. Sectors considered are: manufacturing, construction, and non-financial business services. Businesses never growing above one employee and those living only for one year are excluded. Owing to methodological differences, figures may deviate from officially published national statistics. For Japan data are at the establishment level, for other countries at the firm level.

Source: Preliminary results from the DynEmp project (Crisciuolo *et al.*, 2014).

In some countries, regulatory barriers to entry might explain low start-up rates, but OECD indicators of product market regulation show Norway in a favourable position. Nevertheless, barriers to entry in some services appear relatively high, and some aspects of employment protection, such as a high degree of restriction on the use of temporary contracts, may make start-ups more difficult as well as potentially increasing adjustment costs in established firms. Along with the comparatively high weight of public sector enterprises in the economy, this suggests that framework conditions for entrepreneurship may be a part of the explanation for low start-up rates. In addition, competition policy has a feature that potentially permits competition-restricting mergers more easily than in many other countries. This is the “total welfare” principle, which allows benefits to the merging companies to be taken into account rather than just consumer welfare. As in New Zealand, which uses a similar principle, this may nevertheless be justified in order to allow economies of scale to be effectively exploited in small and geographically remote markets.

Some related evidence is ambiguous. For example start-ups in Norway appear to be somewhat larger in terms of initial employment than in other countries (the same is true for neighbouring Sweden) and their survival rate somewhat higher. Is this a sign that barriers to entry keep out a large share of small potential start-ups, or that Norwegian entrepreneurs put together better developed business plans that allow them to start with more employees and to survive better? Although average survival rates are good, fewer start-ups in Norway experience the very rapid growth that characterises the most successful businesses. Looking for evidence to clarify this kind of issue could be one of the tasks of the new productivity commission.

The new government has taken some measures to increase incentives to innovation, notably raising the ceiling on *Skattefunn* R&D support. It has also announced that it wishes to reduce the burden of bureaucracy. If the latter included reducing unnecessary barriers to entrepreneurship, it could have an even more important impact on innovation and growth than increasing direct subsidies.

In Norway over 30% of employment is in the public sector. The development of new “products” is perhaps less important there than in the private sector, but encouraging an entrepreneurial approach might help to maintain a system that adapts to technological change and looks for more efficient ways of fulfilling the public service objectives. One way is to make more use of contestability in the provision of public services by private providers. Even within the irreducible public sector, a willingness among employees to take some risks in looking for efficiency-enhancing measures could be a force for gains in cost-effectiveness.

Summary of recommendations on Entrepreneurship

- Continue to base innovation support on a competitive-bid based approach rather than automatic support. Continue to focus policy for clusters pragmatically on improving framework conditions and information flows, rather than promoting clusters *per se*.
- In addition to focus on STEM (Science, Technology, Engineering and Mathematics) skills for innovation, ensure that entrepreneurial skills such as risk assessment, people management, project planning and finance are also given a place in the national skills strategy.
- Encourage universities to further develop Technology Transfer Offices (TTOs), including collaboration between universities.
- Consider further reductions in the wealth tax to increase incentives for entrepreneurs.

Human capital, education and the labour market

Innovation and productivity growth may be held back partly because employers underrate the importance of recruiting people with the right kind of skills. By international comparison, the incentive to undertake tertiary education, as measured by the earnings premium and better employment prospects, is relatively low in Norway. This could be an indication of a problem on the demand side, as could the traditionally relatively flat earnings distribution.

Education

The education system itself faces some challenges, as described in the chapter on education in the 2008 *Economic Survey* (OECD, 2008; and Boarini, 2009). First, while the general level achieved by Norwegian secondary school students, as measured at age 15 by the OECD PISA study, is around average, these average results are achieved at well above average costs. Some of the higher costs are due to the costs of providing education in small schools in remote areas, and so might be thought of as a cost of regional policy rather than education policy itself. But other factors, such as insufficient focus on performance at all levels - student, teacher and school - and the level of qualification of teachers, are also likely to play a role.

This problem of the relative cost-inefficiency of the primary and secondary education system has been recognised for some time, and some measures have been taken. To improve teacher quality, entry standards for teacher training were introduced together with a reform of teacher training in 2010. The new teacher training programme will produce more specialised teachers, covering fewer subjects; supplementary education and training for teachers and school principals has also been introduced. Use of existing information on student performance has been somewhat expanded, but has not been extended to full publication of school average results; the new government has said that it will consider taking this step. Publication of results preferably in “value added” form (*i.e.* comparing the improvement in students’ performance during the year, not simply the level attained) was recommended in OECD (2008) and can be a useful tool for encouraging improvement and analysing teaching methods. It could also be a source of frustration in a system without parental choice of school, and potentially lead to too much emphasis on testing, so should be undertaken with some care. In the Oslo education district, teachers and school principals are to some extent rewarded on the basis of performance, unlike in the rest of the country. It is surprising that no study of whether this appears to be effective in raising standards has been undertaken.

A second key challenge in education is the rate of dropout at the upper secondary level, mostly in the vocation-oriented courses. Completion rates are well below the OECD average and the average age at completion significantly higher. One of the reasons that the dropout rate may be higher in Norway is because of the tight labour market. Given that the earnings premium to continuing education may not be high, immediate paid employment can be much more attractive, and many skills can be acquired on the job. Nevertheless, assessing dropout behaviour to understand why it occurs, and how education could be modified to improve employment prospects for current dropouts, could be beneficial.

Subsidies to Norway’s tertiary education system are particularly generous. Tuition is largely free and relatively generous maintenance grants are available. As a result, the costs faced by university students are among the lowest in the OECD and public spending on tertiary education one of the highest relative to GDP. These forms of support are independent of the cost of the course being followed and the likely value of different courses to society. OECD calculations of the returns to education show that the estimated rate of return to education, which depends importantly on the difference between observed average earnings for graduates compared with non-

graduates, is lower in Norway than in most countries. In Norway the private rate of return is 6.7% compared with the OECD average of 11.2%; the public return for Norway is 5.7%, compared with an OECD average of 13.0%.

These figures may suggest that public subsidies are excessive, especially if most of the benefits of tertiary education accrue to the graduates themselves rather than to the population as a whole, so that subsidies can be regressive. In this case, a system of charging tuition fees, related to the cost of the course, could improve efficiency, for example through shorter duration of studies and students with more demanding expectations for value for money. Since support for tertiary education requires financing through the tax system, reducing the subsidy could also increase equity. To overcome financing difficulties, a system of student loans with income-contingent repayment, perhaps supplemented by means-tested grants for poorer families, can accompany tuition fees. However, it can be argued that the flat wage structure in Norway compresses the observed earnings premium – some of the benefit of higher productivity of graduates accrues to non-graduates' earnings. If this effect is more important in Norway than elsewhere, the comparison of rates of return may be biased.

There are other ways to improve efficiency in tertiary education. Better use could be made of available data on career and income prospects associated with different subjects to take, and different institutions in which to study, to help students choose what courses to follow. Like in some other countries, study programmes, especially at the graduate level, could face a sunset clause and be renewed only when there are proven benefits to society, including in terms of job placement and earnings. The actual budget cost per student should also be made more explicitly visible, to encourage value for money.

Adult skills

Despite evidence that the education system is inefficient and attainment levels at age 15 are only average, overall productivity in Norway is high. Perhaps the tertiary education system and work experience are sufficiently effective to compensate for possible gaps in the compulsory education system. It may also be that some aspects of the school education system which do not generate good scores in tests at age 15, for example the lack of competitive pressure and the emphasis on a cooperative approach, are a good foundation for later acquisition of skills.

Recently published data from the Programme for International Assessment of Adult Competences (PIAAC) may corroborate some worries about the education system, but also give grounds for optimism. Norwegian adults on average perform relatively better on PIAAC overall (where they are above average) than in PISA. They rank sixth for both literacy and numeracy, and fourth for problem solving out of the 23 countries in the PIAAC sample, whereas in PISA Norway ranks 8th for literacy (above average) and 12th on numeracy (below average) in the same sample of countries. Norway is unusual among PIAAC countries in that young people, aged 16-24, perform worse on literacy tests than all other age groups except the 55-65 group. It is rare for older age groups to out-perform the young, which might suggest some problems in the education system. On the other hand, when it comes to problem

solving, the young in Norway exceed the performance of older people by a greater margin than in most countries. The overall good performance and especially that of the young, in “problem solving in technology-rich environments” is interesting alongside Norway’s very rapid adoption of ICT in all walks of life but especially in public and private services, of which it may be both cause and effect.

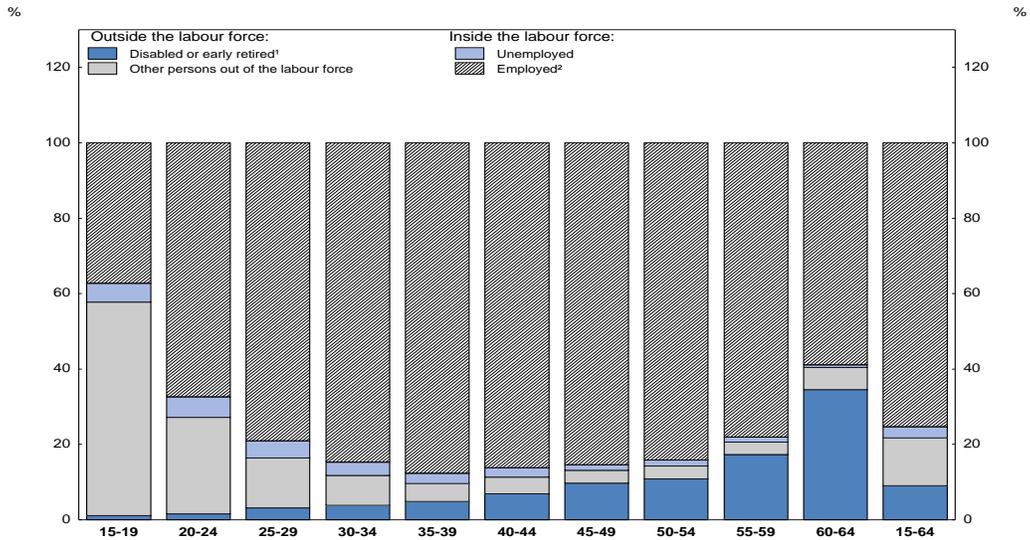
Norway is currently developing a “skills strategy”, discussing what is lacking and what is needed with all the social partners and in cross-ministry discussions. The strategy may need to pay more attention to skills for entrepreneurship. Education and training planning has to try to anticipate the skills which will be needed in the future, but skilled entrepreneurs will be responsible for translating those needs into demand for labour and supply of jobs.

The labour market

On most measures the labour market continues to perform very well. Low unemployment generates strong wage growth, but not so strong as to threaten inflation, and annual negotiations between unions and employers try to set wage growth at levels with which the relatively less competitive sectors of the economy can cope. At the same time, the tight labour market and the high wages attract strong labour immigration. In the private sector, long working lives contribute to Norway having one of the highest average ages of effective retirement in the OECD. The pension system still encourages early withdrawal from the labour market for public sector employees, however, because the reform of the early retirement system agreed by the social partners for the private sector has not been agreed by the public sector.

As has been pointed out in previous Economic Surveys, although Norway benefits from high participation and low open unemployment overall, the sickness and disability system gives excessive incentives for some people to withdraw from the labour market. To a great extent this is in effect a disguised early retirement system – Norway has one of the highest rates of both sickness and disability in the OECD (OECD, 2010), but no other indicators suggest an unhealthy population - allowing a significant proportion of people to exit the labour market well before normal retirement age (Figure 11). Governments have attempted to reduce take-up of disability benefits largely by trying to improve gate-keeping, but this appears to have only transitory effects. Recent measures to expand the possibility to use partial disability benefits in parallel with employment are a sensible step but are unlikely to address the more fundamental problem of use of disability to, in effect, retire. As previous Economic Surveys have pointed out, if tighter gate-keeping cannot be made effective, it may be necessary to reduce lower the level of disability benefits to reduce “demand” for this programme.

Figure 11. Population structure, 2010



Note: This chart is based on a mixture of administrative data and survey data which may not be strictly comparable. 'Employed and in education', 'Not employed and in education', 'Disabled or early retired' use self-reported data on main activity; according to Statistics Norway and Ministry of Finance, no factual data on the labour market status of persons in education and persons receiving disability or early retirement benefits are available. For more categories and details see OECD (2012) Figure 9, page 24.

1. This is an estimate based on the Labour Force Survey of the number of persons who are outside the labour force and self-report 'Disability or early retirement' as their main activity. It is assumed that no person inside the labour force is disabled or early retired.
2. Including those in education.

Source: Statistics Norway.

Summary of recommendations on education and labour market policy

- Continue to improve the level of training of teachers. Investigate the impact of the performance assessment and reward approach used in Oslo on educational outcomes there compared with those in the rest of the country.
- Focus more on cost-effectiveness in tertiary education, with better incentives for both students and institutions. To improve equity and strengthen the link between demand for skills and their supply, consider measures such as more guidance on course selection, better information for students on career prospects, differentiated tuition fees or differentiating (existing) grants, and penalties for excessive duration of studies.
- Lower the replacement rate for long-term sickness absence and shift some of the costs onto employers. To avoid encouraging early withdrawal from the labour market, align the rules for early retirement in the public sector with those in the private sector.
- Further widen the use of standardised student tests - in value added form - for assessing school and teacher performance. Consider the costs and benefits of publication of these tests at the school level.
- Provide clear guidelines on disability assessment to general practitioners and monitor compliance. Make more extensive use of partial disability benefit awards.

BIBLIOGRAPHY

- Akram, Q. F. (2012), “Macro effects of capital requirements and macroprudential policy”, Norges Bank Working Paper No. 21.
- BCBS (2010), Interim Report: Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements, Bank for International Settlements, Basel.
- Boarini, R. (2009), “Making the most of Norwegian Schools”, OECD Economics Department Working Papers, No. 661, OECD Publishing.
- Brandt, N., P. Schreyer and V. Zipperer (2013), “Productivity Measurement with Natural Capital”, OECD Economics Department Working Papers, No. 1092, OECD Publishing.
- Criscuolo, C., P. Gal and C. Menon (2014, forthcoming) “The dynamics of employment growth: new evidence from 17 countries”, by Chiara Criscuolo, Peter Gal and Carlo Menon”.
- Denk, O. (2012), “Tax Reform in Norway: A Focus on Capital Taxation”, OECD Economics Department Working Papers, No. 950, OECD Publishing.
- Finanstilsynet (2013), Risk Outlook 2013.
- Global Entrepreneurship Monitor (GEM), 2011.
- Gelain, P., K. J. Lansing, and C. Mendicino (2012), “House prices, credit growth, and excess volatility: Implications for monetary and macroprudential policy”, Norges Bank Working Paper, No. 08.
- IMF (2013) Article IV consultations.
- Ministry of Finance (2012), “Report to the Storting on the Management of the Government Pension Fund in 2011.”
- Norges Bank (2012a), Monetary Policy Report 1/2012.
- Norges Bank (2012b), Monetary Policy Report 2/2012.
- OECD (2010), “Sickness and Disability”.
- OECD (2008), OECD Economic Survey of Norway, 2008.
- OECD (2012), OECD Economic Survey of Norway, 2012.
- Olsen, Ø. (2013a), “Macroprudential regulation and monetary policy”, speech by Norges Bank Governor at the Norwegian Business School, 7th October.
- Olsen, Ø. (2013b), “Macroprudential policy and financial stability”, speech by Norges Bank Governor to the Norwegian Savings banks Association, 31st October.

ANNEX

Follow-up to previous OECD policy recommendations

This annex reviews recent action taken on recommendations from previous *Surveys*. Recommendations that are new in this *Survey* are listed in the relevant chapter. An indication of the first year in which recommendations appeared is given in parentheses (except that we have not tracked back before 2005).

This annex presents, under each theme:

- Recommendations from earlier surveys
 - ❖ Action taken since the previous survey (2012)

Social Protection

- Minimise work disincentives in the unemployment insurance system. (Since 2005).
 - ❖ *The maximum unemployment benefit period for temporary laid-off workers, which had been increased as an anti-crisis measure, was reduced to 30 weeks within any 18-month period. As from 2014 it will return to its statutory level of 26 weeks.*
- Reduce sick leave. (Since 2005).
 - ❖ *No recent action. Since July 2011, measures to provide for earlier and closer monitoring of sick leave have been in place, with provision for sanctions against the employee, employer and doctor for failure to follow up. The government takes part in the Inclusive Working Life Agreement with between social partners, without proposing further changes since then. The agreement aims at 20% reduction in sick leave, measured as a percentage of scheduled man-days compared with 2001 and introduced new or extended administrative procedures; compulsory meetings or plans for activation.*
- Tighten disability schemes. (Since 2005).
 - ❖ *No recent action on access. In 2013, a new trial with using the work assessment allowance as a wage supplement, to make it easier to combine disability benefits and work, was launched.*

Labour Markets

- Increase flexibility in wage setting. (Since 2005).
 - ❖ *No recent action.*
- Modernise employment protection legislation. (Since 2005).
 - ❖ *No action.*
- Enhance efficiency of job placement services and ALMP. (Since 2005).

- ❖ *The July 2006 merger of the Public Employment Services and the National Insurance Services was completed in early 2011. This resulted in the creation of NAV. The reform will be under evaluation until 2014.*

Education

- Reduce the number of schools; improve accountability by publishing value-added assessment of school performance on standardised national tests of pupils. (Since 2010).
 - ❖ *No recent action.*
- Introduce stricter selection and graduation criteria for initial teacher training; encourage formal training for developing competencies of practising teachers. (Since 2010).
 - ❖ *No recent action on selection or gradual criteria in teacher training. The system of support of teachers' continuous professional development will be further strengthened in 2014.*
- Develop more structured career paths with recognition for demonstrated competencies.
 - ❖ *No action.*
- Include school performance as a determinant of school principals' rewards; consider school level merit-based salary awards to teachers. (Since 2010).
 - ❖ *No action. Oslo education authorities have operated along these lines for several years.*
- Make the allocation of public funds to higher education institutions more transparent. (Since 2012).
 - ❖ *No action.*

Health Care

- Structure activity-based (including Diagnosis Related Groups, DRG) financing to avoid excessive incentives for low-priority activities. Make greater use of co-payments by patients. (Since 2005).
 - ❖ *In the National Budget 2014, the government proposes to increase the percentage reimbursed under activity-based financing from 40% to 50% of calculated DRG costs.*
 - ❖ *No action on the use of co-payments by patients.*

Financial Markets

- Reduce vulnerabilities to the banking sector (e.g. introduce a limit on loan-to-value ratios). (Since 2012).
 - ❖ *New capital and buffer requirements for credit institutions and investment firms – based on the Basel III standards and the CRR/CRD IV framework came into force on 1 July 2013. The requirements will be gradually increased over a three-year period, and fully phased-in by 1 July 2016.*
 - ❖ *A counter-cyclical capital buffer was introduced in December 2013, to be effective from July 2015.*
 - ❖ *As from October 2013, banks using internal rating based (IRB) risk models must use a minimum level of 20% (raised from 10%) for the loss given default estimate for most residential mortgage loans. In effect this raises the average risk-weight on residential mortgage loans to about 20% for IRB banks.*

Quality of Public Finance

- Tackle ageing issues. (Since 2007).
 - ❖ *No recent action. The early retirement scheme in the public sector continues to strongly encourage workers to retire at age 62.*
- Investigate the impact of the combination of wealth and capital income taxes and align the taxation of different asset classes. (Since 2012).
 - ❖ *In 2014, the rate of wealth tax is reduced from 1.1% to 1.0%. The tax-assessed values of second homes and business property are increased from 50% to 60% of their market values; the rate for first homes remains 25%. The threshold triggering wealth tax is increased from NOK 870 000 to NOK 1 000 000.*
 - ❖ *The inheritance tax is abolished from 2014.*
 - ❖ *The tax rate on ordinary income (which includes capital income) is reduced from 28% to 27%.*
- Reduce the implicit tax subsidy to owner-occupied housing: tax the imputed income or remove progressively mortgage interest deductibility. (Since 2010).
 - ❖ *No action.*
- To raise the efficiency of public spending, evaluation tools such as regulatory impact analysis and cost-benefit analysis should be used more systematically. (Since 2012).

- ❖ *No significant action. The Ministry of Government administration, reform and church affairs has initiated a project to draft a new instruction for official studies and reports. The objective is to increase the quality and frequency of regulatory impact analysis.*
- ❖ *Cost-benefit guidelines will be modified in 2014 on the basis of a 2012 committee report.*
- Develop a multi-annual approach to budgetary planning. (Since 2012).
 - ❖ *The new government has announced that it will appoint a commission to give advice on multi-annual budgeting.*

Environmental Policies

- Limit CO₂ emissions, and reduce the divergence of rates in the CO₂ tax. (Since 2010).
 - ❖ *From 2013 the CO₂ tax on petroleum activities was increased from 210 NOK per ton to 410 NOK. Petroleum activities are also included in the EU ETS. In the 2013 budget, the government introduced a specific CO₂ tax on mineral oil for the fishing fleet operating in coastal waters with the tax rate set at 49 NOK per ton in 2013. It is proposed that the tax rate increases further to 98 NOK per ton from January 2014.*
 - ❖ *From 2014 it is proposed that the general CO₂ tax rate on mineral oil and gas and the tax on HFC and PFC be increased by about 100 NOK to about 330 NOK per ton of CO₂ equivalents. Auto diesel subject to road usage tax is exempted from the tax increase, whilst the specific tax rates for domestic aviation increase by about 50 NOK per ton of CO₂.*
 - ❖ *With the changes to the CO₂ tax, as well as the inclusion of the aviation sector and the processing industry into the EU ETS, it is estimated that more than 80% of Norwegian GHG emissions are subject to a price on carbon. But the rates remain very divergent across different emission sources. It is mainly agriculture and treatment of waste that does not face carbon prices.*
- Account systematically for environmental aspects in cost-benefit calculations (e.g. by using an explicit shadow price for GHG emissions). (Since 2010).
 - ❖ *A government appointed expert committee presented a report in October 2012 on cost-benefit analyses, including recommendations regarding shadow pricing of GHG emissions. The guidelines for cost-benefit analyses are being revised.*

Agriculture and Fishery

- Enhance competition in the agriculture market. (Since 2006).
 - ❖ *No action.*
- Reduce tariffs and increase import quotas in the agriculture market. (Since 2008).
 - ❖ *Backward action: The Norwegian government changed from specific duties to ad valorem duties for six tariff lines, comprising beef steaks and fillets, lamb carcasses and hard cheeses, effective from January 2013.*
- Reduce restrictions on transfers of fishing quotas. (Since 2010).
 - ❖ *No action.*

Support Competition and Reduce State Aid

- Increase regulatory power of competition authorities. (Since 2005).
 - ❖ *No action.*
- Reduce state aid, public subsidies and tax distortions. (Since 2005).
 - ❖ *Budgetary support for industry has increased slightly. There has been a significant increase in actual payments to the renewable and clean energy sector.*
- Reduce state ownership in corporate Norway. (Since 2005).
 - ❖ *In 2012, Statoil, a partly publically owned petroleum company, decided to sell its stake in the transport fuel retailer Statoil Fuel & Retail. Vinmonopolet, a publically owned alcoholic beverage retailer, is thus the only remaining publicly owned company in retail.*
 - ❖ *Backward action: The Ministry of Trade and Industry proposed to Parliament that the Ministry be authorised to increase its shareholding in the fish farming and fish feed producer Cermaq ASA, and/or to sell its shares in the company. Following this the government increased its stake in Cermaq from 43.54% to 59.17%.*
- Improve state-owned activities governance. (Since 2005).
 - ❖ *The Norwegian authorities have asked the OECD to clarify how the OECD Guidelines for Multinational Enterprises should be*

interpreted and the extent to which these are tailored to sovereign wealth funds like the GPFG.

- Improve monitoring of cost-effectiveness of support for innovation and R&D. (Since 2008).
 - ❖ *Evaluation reports have become standard practice. They tend to focus more on additionality of spending than the more difficult issue of its effectiveness.*

Product Market Competition

- Promote competition in the postal services. (Since 2005).
 - ❖ *No action.*
- Reduce barriers to entry in the retail sector. (Since 2005).
 - ❖ *Backward action: The book agreement in April 2013 that regulates a fixed scheme for the sale of books would form the basis for the introduction of a book law. Such a law would lead to limited price competition among books, which results in high and fixed prices.*
 - ❖ *In October 2013, the Ministry of the Environment has circulated a proposal for new state land use regulations for the localisation of retail malls and commercial activities. This will make it harder to establish malls outside city centres. The proposal implies that establishing trading businesses with a floor space exceeding 3 000 square meters shall not be allowed outside urban centres, unless the county governor agrees.*
- Enhance efficiency in transport services. (Since 2005).
 - ❖ *No action.*

Chapter summaries

Chapter 1. The financial system and real estate: Strengthening resilience

In Norway house prices have risen to high levels, associated with very strong credit growth, in a context of low interest rates. Such a combination was in many countries a contributory factor to the 2008-09 crisis. The Norwegian authorities have been well aware of the problem. Below-target inflation and low interest rates abroad have kept policy interest rates low. “Macro-prudential” tools have been developed as additional policy instruments with a view to strengthen the banking system’s resilience to possible shocks and dampen systemic risk. This chapter notes that although the authorities seem to have succeeded in containing over-heating pressures in the housing market, high levels of household indebtedness persist, a phenomenon which was an important factor in the last major Norwegian recession. The chapter also provides some longer run considerations on resource allocation in the housing market.

Chapter 2. Entrepreneurship

Innovation is often, and correctly, thought of as the source of productivity growth and thus of increases in material well-being. But innovation does not occur in a vacuum, it occurs in firms and organisations that bring together resources – people, knowledge, physical and financial capital – to undertake projects with uncertain outcomes. The people that bring together these resources, and take risks in doing so, are entrepreneurs, though not all of them successfully innovate. This chapter notes that entrepreneurship is useful in the private and public sectors and in both small and large firms, new and old. With its wealth, generous welfare system and even income distribution, Norway might not be a fertile ground for entrepreneurial risk taking. Indeed self-employment and new firm creation are relatively low in Norway, although the survival rate of start-ups is higher than in many countries. Policy in Norway avoids pursuing too specific industrial or employment targets. It mostly refrains from protecting uncompetitive industries, with the notable exception of agriculture. And judging by continuing productivity growth and fairly healthy rates of firm creation, outcomes are satisfactory, even though some countries appear to do better. Best practices for policy are often not clear, but policy can move incrementally towards improvement in the education and research systems, as well as re-evaluating the role of competition policy and public ownership.

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

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Further information

For further information regarding this overview, please contact:

Patrick Lenain, e-mail: Patrick.lenain@oecd.org; tel.: +33 1 45 24 88 07
Paul O'Brien, e-mail: paul.obrien@oecd.org; tel.: +33 1 45 24 87 64 or
Yosuke Jin, e-mail: yosuke.jin@oecd.org; tel.: +33 1 45 24 17 44.

See also <http://www.oecd.org/eco/surveys/Norway>.

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