OECD Economic Surveys
NORWAY

JANUARY 2016

OECD

OECD Economic Surveys: Norway 2016

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Please cite this publication as:
OECD (2016), *OECD Economic Surveys: Norway 2016*, OECD Publishing, Paris.
http://dx.doi.org/10.1787/eco_surveys-nor-2016-en

ISBN 978-92-64-20631-1 (print)
ISBN 978-92-64-20632-8 (PDF)
ISBN 978-92-64-24955-4 (epub)

Series: OECD Economic Surveys
ISSN 0376-6438 (print)
ISSN 1609-7513 (online)

OECD Economic Surveys: Norway
ISSN 1995-3321 (print)
ISSN 1999-0383 (online)

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Photo credits: Cover © Comstock/Comstock Images/Getty Images.

Table of contents

Thematic chapters

Boxes

Tables

Figures

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

The economic situation and policies of Norway were reviewed by the Committee on 25 November 2015. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 8 December 2015.

The Secretariat's draft report was prepared for the Committee by Philip Hemmings and Vassiliki Koutsogeorgopoulou under the supervision of Piritta Sorsa. Secretarial assistance was provided by Anthony Bolton and Mikel Inarritu with statistical assistance by Taejin Park.

The previous Survey *of Norway was issued in March 2014.*

BASIC STATISTICS OF NORWAY

(Data refer to 2014, unless otherwise stated numbers in parentheses refer to the OECD average)[a]

LAND, PEOPLE AND ELECTORAL CYCLE

Population (million)	5.1		Population density per km²	13.3	(34.9)
Under 15 (%)	18.1	(18.1)	Life expectancy (years, 2013)	80.8	(80.4)
Over 65 (%)	16.0	(16.0)	Men	77.6	(77.8)
Foreign-born (%, 2011)	12.4		Women	84.0	(83.0)
Latest 5-year average growth (%)	1.2	(0.6)	Latest general election	September 2013	

ECONOMY

Gross domestic product (GDP)			Value added shares (%)		
In current prices (billion USD)	502.0		Primary sector	1.7	(2.6)
In current prices (billion NOK)	3 154		Industry including construction	38.2	(26.5)
Latest 5-year average real growth (%)	1.5	(1.9)	Services	60.1	(71.0)
Per capita (000 USD PPP)	64.9	(39.0)			

GENERAL GOVERNMENT

Percentage of GDP

Expenditure	45.6	(41.5)	Gross financial debt	32.7	(115.5)
Revenue	54.7	(38.8)	Net financial debt	-242.0	(71.7)

EXTERNAL ACCOUNTS

Exchange rate (NOK per USD)	6.3		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	9.5		Mineral fuels, lubricants and related materials	64.7	
In percentage of GDP			Machinery and transport equipment	9.5	
Exports of goods and services	38.7	(53.8)	Food and live animals	7.9	
Imports of goods and services	29.5	(49.8)	Main imports (% of total merchandise imports)		
Current account balance	9.7	(0.0)	Machinery and transport equipment	39.2	
Net international investment position (2013)	123.3		Manufactured goods	15.3	
			Miscellaneous manufactured articles	15.2	

LABOUR MARKET, SKILLS AND INNOVATION

Employment rate for 15-64 year-olds (%)	75.2	(65.7)	Unemployment rate, Labour Force Survey (age 15 and over) (%)	3.5	(7.3)
Men	77.0	(73.6)	Youth (age 15-24, %)	7.9	(15.0)
Women	73.4	(57.9)	Long-term unemployed (1 year and over, %)	0.4	(2.5)
Participation rate for 15-64 year-olds (%)	78.1	(71.2)	Tertiary educational attainment 25-64 year-olds (%, 2013)	39.8	(33.3)
Average hours worked per year	1 427	(1 770)	Gross domestic expenditure on R&D (% of GDP, 2013)	1.7	(2.4)

ENVIRONMENT

Total primary energy supply per capita (toe)	5.9	(4.1)	CO_2 emissions from fuel combustion per capita (tonnes, 2013)	6.9	(9.6)
Renewables (%)	43.5	(9.1)	Municipal waste per capita (tonnes, 2013)[b]	0.5	(0.5)
Population exposure to fine particulates ($PM_{2.5}$, µg/m^3, 2013)	6.0	(13.8)			

SOCIETY

Income inequality (Gini coefficient, 2012)	0.253	(0.308)	Education outcomes (PISA score, 2012)		
Relative poverty rate (%, 2012)	8.1	(10.9)	Reading	504	(496)
Median disposable household income (000 USD PPP, 2012)	35.5	(21.9)	Mathematics	489	(494)
Public and private spending (% of GDP)			Science	495	(501)
Health care (2013)[c]	9.7	(9.0)	Share of women in parliament (%, November 2015)	39.6	(27.8)
Pensions (2011)	7.4	(8.7)	Net official development assistance (% of GNI)	1.0	(0.36)
Education (primary, secondary, post sec. non tertiary, 2012)	4.6	(3.7)			

Better life index: *www.oecdbetterlifeindex.org*

a) Where the OECD aggregate is not provided in the source database, a simple OECD average of latest available data is calculated where data exist for at least 29 member countries.

b) 2012 for the OECD aggregate.

c) 2011 for the OECD aggregate.

Source: Calculations based on data extracted from the databases of the following organisations: OECD, International Energy Agency, World Bank, International Monetary Fund and Inter-Parliamentary Union.

Abbreviations and acronyms

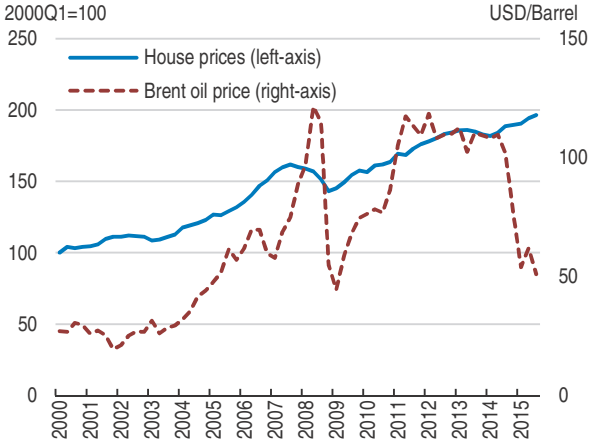
ALMP	Active Labour Market Policies
BEPS	Base Erosion and Profit Shifting
CO_2	Carbon-dioxide
DRG	Diagnosis-Related Groups
ECTS	European Credit Transfer System Standard
EEA	European Economic Area
GHG	Green-house gas
GPFG	Government Pension Fund Global
HFC	Hydrofluorocarbons
ICT	Information and Communications Technology
LPG	Liquid Petroleum Gas
MFN	Most Favoured Nation
PFC	Perfluorinated chemicals
PIAAC	Programme for the International Assessment of Adult Competencies
PPP	Public-Private Partnerships
PSE	Producer Support Estimates
RCN	Research Council of Norway
R&D	Research and Development
SCT	Single-Commodity Transfer
STEM	Science, Technology, Engineering and Mathematics
TTO	Technology Transfer Offices
VAT	Value Added Tax

Executive summary

- *Adjusting to lower oil incomes and monitoring the property-market boom*
- *Bolstering competitiveness on a wide range of fronts*
- *Improving skills to help productivity and inclusiveness*

Adjusting to lower oil incomes and monitoring the property-market boom

House and oil price developments

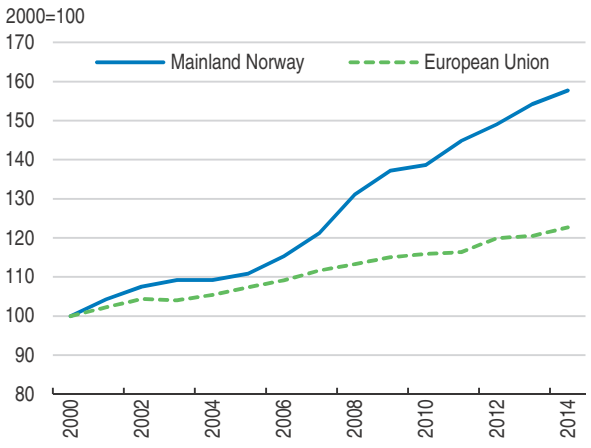


StatLink http://dx.doi.org/10.1787/888933316495

Norway has very high material living standards and scores well on other aspects of well-being, thanks to a mix of natural resources wealth, good policy making and inclusive and egalitarian social values, including active efforts to break down barriers to women's careers. However, the substantial oil-price falls since 2014 have been a reminder of Norway's exposure to external risks and consequently the importance of a flexible and competitive mainland economy. Norway continues to experience strong property-price momentum, raising concerns for macroeconomic stability. Also, the long-standing fiscal rule risks being inappropriately expansionary.

Bolstering competitiveness on a wide range of fronts

Unit labour cost

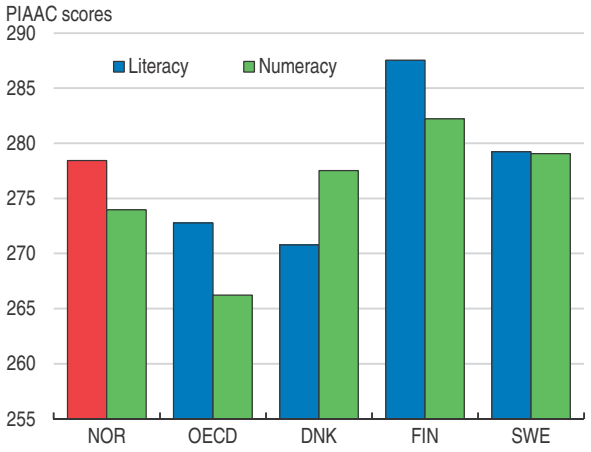


StatLink http://dx.doi.org/10.1787/888933316509

Norway lost some competitive edge in the past 10-15 years and trend productivity growth has been slowing. Improving the framework conditions to address these issues is key. Recent reform initiatives by the current government are welcome and should continue. Taxation needs to be scaled back and better tuned to growth, and public-sector efficiency reforms need to be pursued vigorously. Furthermore, campaigns to reduce bureaucracy need to continue. Some sectors, notably agriculture, need to be less sheltered from international competition. Agriculture and rural policy needs to focus more strongly on economic sustainability.

Improving skills to help productivity and inclusiveness

Skills outcomes



StatLink http://dx.doi.org/10.1787/888933316517

Reforms that enhance skills are also important for economic success and social well-being. Further improvements to both compulsory and tertiary education in terms of quality and efficiency are essential. Tertiary-education policy needs to examine the structure of provision and the incentives that drive student decisions on what to study and the pace of study. Programmes addressing the longstanding problems of the sickness and disability system that discourage labour supply need to continue.

MAIN FINDINGS	KEY RECOMMENDATIONS
Ensuring price and financial stability	
Continued increases in property prices and mortgage lending poses risks.	Should house-price growth remain uncomfortably high, consider tightening macroprudential measures while closely monitoring and reviewing their effectiveness.
Avoiding pro-cyclicality in fiscal policy, ensuring efficient tax and public spending	
Fiscal policy has been persistently expansionary but is still well below what the fiscal rule will allow.	Keep the deficit well below the fiscal rule to avoid unwanted fiscal expansion by providing guidance that sets a speed-limit on increases in the structural non-oil deficit.
Norway's tax burden is among the highest in the OECD, hindering economic diversification and international cost competitiveness.	Consistent with the government's policy of reducing taxation, use the ample fiscal space to lower the tax burden and shift away from income taxation towards indirect taxation. Reduce tax distortions in housing by either scrapping mortgage-interest relief or by increasing property taxes on housing as a proxy for implicit rent.
Creating room for lighter taxation requires renewed attention to public-spending efficiency.	Bring more private-sector provision to public services, including in education and health care where outsourcing remains underutilised. Continue to press for mergers among small municipalities.
Boosting productivity through a more supportive business environment, and stronger competition	
Weak capacity to compete on cost amplifies the need for good business framework conditions on other fronts. Despite best-practices in many aspects of business regulation and market competition, Norway lags behind markedly in some areas.	Cut corporate and personal income taxation further in the tax mix. Expedite campaigns to cut red tape. Press on with de-regulation, for instance in shop-opening hours. Continue network-industry reform, particularly in post and rail services. Reduce import tariffs and direct subsidies to farmers. Remove legislative biases that favour agriculture. Encourage diversification of economic activity in rural areas by improving general framework conditions.

MAIN FINDINGS	KEY RECOMMENDATIONS
Output growth and inclusiveness through deepening skills and encouraging labour supply	
Substantial public resources are spent on education but outcomes are not exceptional – Norway's PISA score is middle ranking and it has comparatively few internationally top-ranking universities – and there is room for efficiency improvements in the pace of study and the structure of provision.	Continue to improve primary and secondary teacher training and tackle low upper-secondary completion rates. Make school-performance data more readily available. Pursue the Skills Strategy to strengthen the link between skills development and economic growth. Continue to promote mergers among higher education institutions. Pursue plans to include the graduation rates in the formula for performance-based funding. Further target incentives and financial support to students who complete their courses on time. Steer student choices, for instance, via loan discounts for subjects with high demand.
Employment rates are impressively high but there are nevertheless weak points.	Press on with reform to sick leave and disability benefit. Rectify early retirement biases in public-sector pensions. Liberalise temporary working.
Environmental sustainability	
Greenhouse-gas emissions are already low owing to through emission-free hydroelectricity generation.	Use the most cost-efficient mechanism to further reduce emissions, in particular work further on reducing disparities in greenhouse-gas taxation.

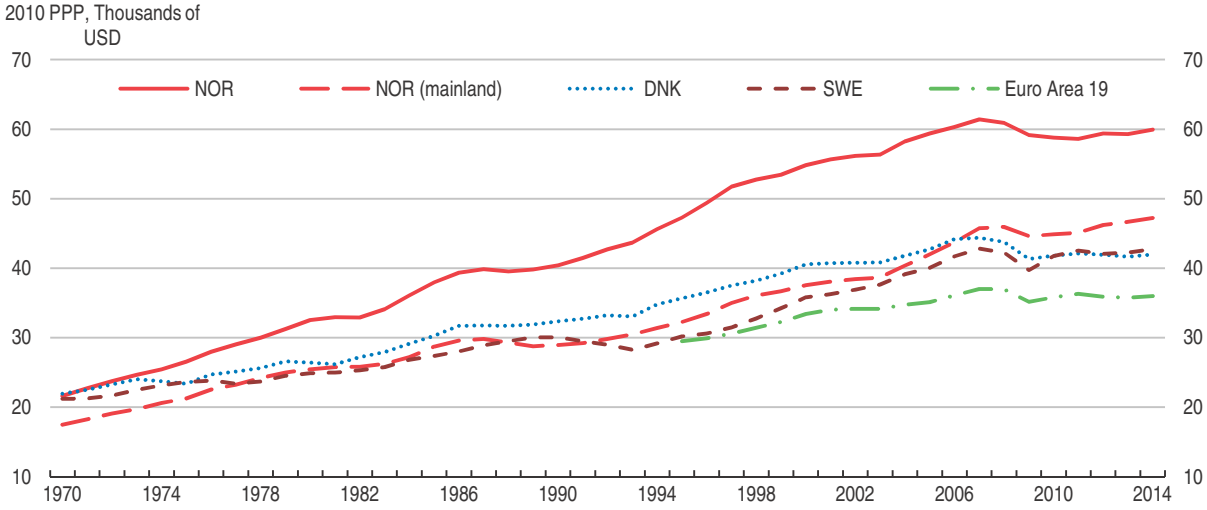
Assessment and recommendations

- *Recent macroeconomic developments and near-term prospects underscore the main challenges*
- *Ensuring price and financial stability*
- *Getting the fiscal rule right, ensuring efficient tax and public spending*
- *Boosting productivity through a more supportive business environment and stronger competition*
- *Boosting output and inclusiveness by improving skills and encouraging labour supply*
- *Tackling environmental issues*

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Norway's economy has been transformed since the discovery of commercially viable offshore oil and gas fields in the late 1960s which helped the country to achieve a high level of GDP per capita (Figure 1). Good macroeconomic management of the oil wealth via the sovereign wealth fund and the associated fiscal rule has helped achieve impressive standards of living across society. Also, inflows of labour from other European Economic Area (EEA) countries have supported activity and reduced the risk of overheating.

Figure 1. **Norway's gross domestic product per capita is high**



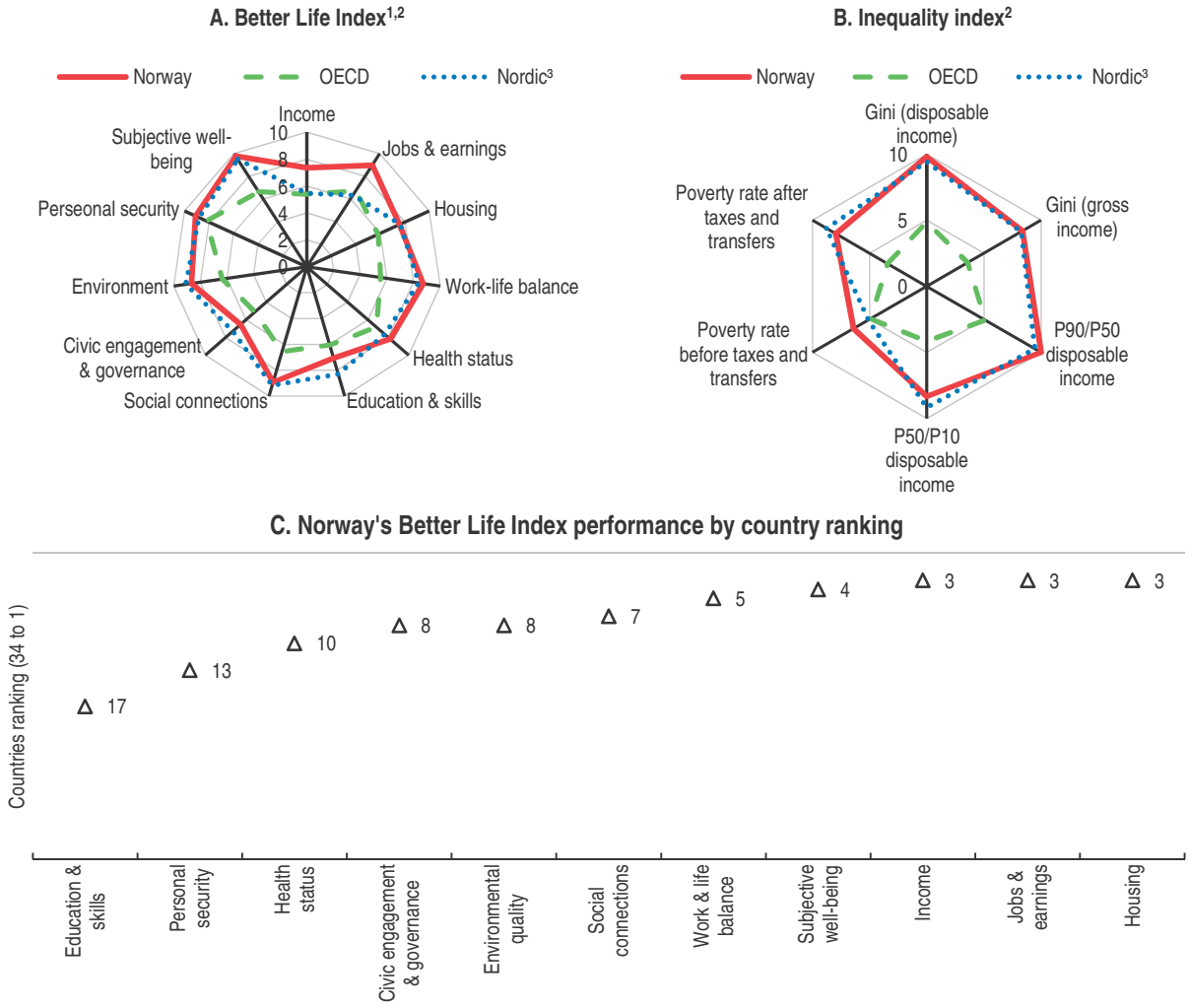
Source: OECD (2015), "Aggregate National Accounts", SNA 2008 (or SNA 1993): "Gross domestic product", *OECD National Accounts Statistics* (database); OECD (2015), *Analytical Database*.

StatLink http://dx.doi.org/10.1787/888933314686

The country scores well in practically every dimension of the OECD's *Better Life Index* (Figure 2). Household disposable income ranks third highest in the OECD area and this is echoed in good outcomes in jobs, earnings, and housing. Furthermore, scores relating to subjective well-being, work-life balance and the environment are good. Low levels of inequality and poverty are being driven by strong societal values of inclusiveness and egalitarianism and by other features of the "Nordic model". In particular, emphasis on the quality of education, encouraging and facilitating the employment of women, well-functioning centralised wage bargaining systems, good legal frameworks for business and high levels of trust in society.

Sustaining these outstanding economic and social outcomes is the key priority for Norway's economic policy makers. The oil-price drop in mid-2014 (Figure 3, Panel A) has served as a timely reminder that a flexible, competitive and productive mainland economy and a floating exchange rate are central to cushioning external shocks and to developing balanced growth once the income from petroleum begins to fade. In this regard, it is of concern that Norway's mainland economy has experienced a secular decline in

Figure 2. **Norway scores well in measures of well-being**



1. How to read this figure: each well-being dimension is measured using one to three indications from the OECD Better Life Indicator set with equal weights.
2. Indicators are normalised by re-scaling to be from 0 (worst) to 10 (best).
3. Nordic is a simple average of Denmark, Finland and Sweden.

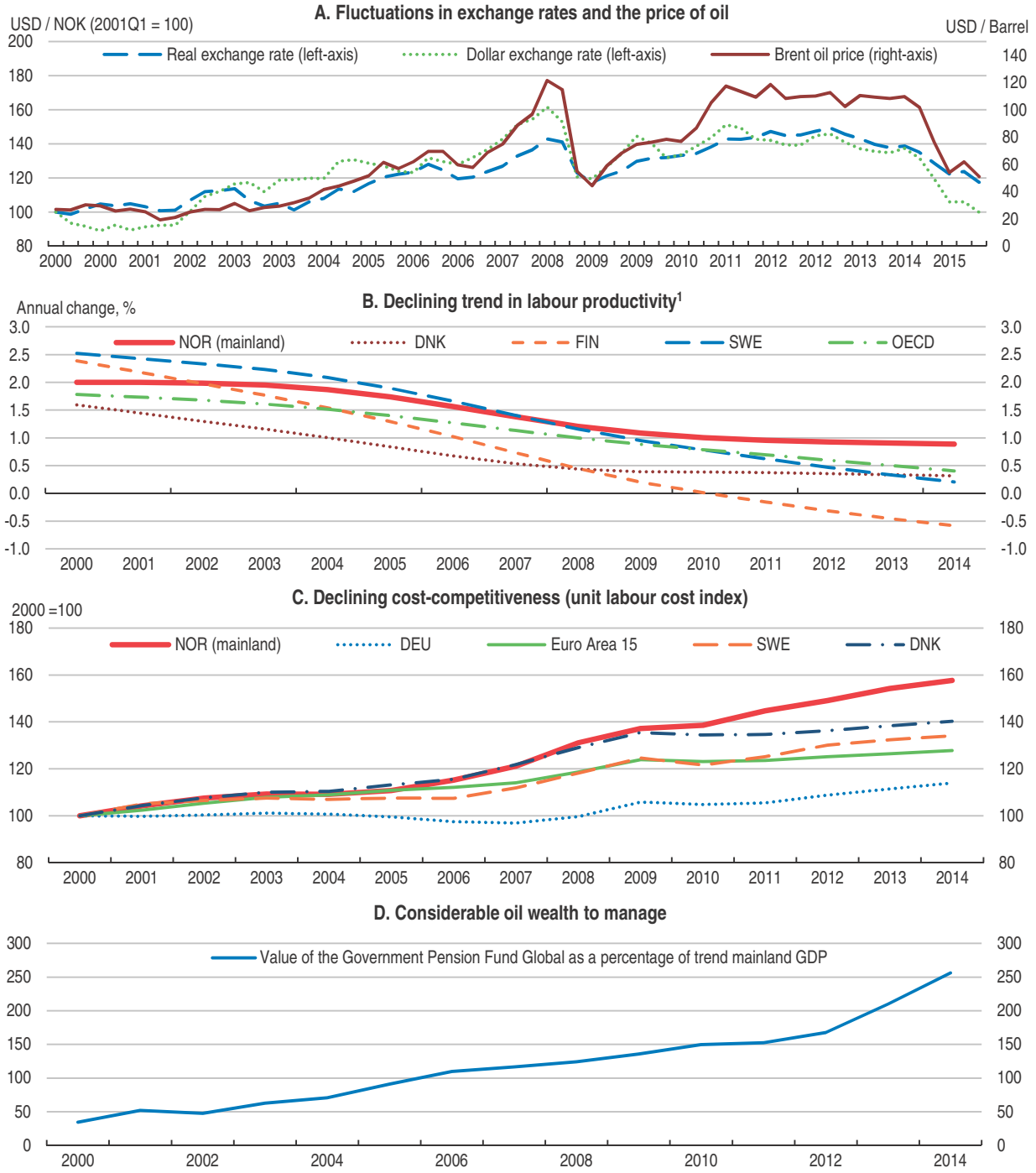
Source: Calculations based on OECD (2015), "Better Life Index 2015", *OECD Social and Welfare Statistics* (database); OECD (2015), "Income distribution", *OECD Social and Welfare Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933314698

productivity growth and loss of international competitiveness due to unit-labour-cost increases over the past 10-15 years (Figure 3, Panels B and C). Against this backdrop, the main messages of this *Survey* are:

- Continue to ensure that strong macroeconomic policies cushion the Norwegian economy from external shocks, and equitably and sustainably manage its petroleum wealth. This includes a focus on the cost effectiveness of public spending to ensure the now large oil wealth (Figure 3, Panel D) and tax revenue are well used.
- Use structural policies to foster stronger productivity growth and international competitiveness, and to smooth adjustment towards less medium-term dependence on petroleum.

Figure 3. **Key challenges for the Norwegian economy**



1. Data are smoothed by the Hodrick-Prescott filter.

Source: OECD, *Analytical Database*; Norwegian Ministry of Finance.

StatLink http://dx.doi.org/10.1787/888933314708

Chapter 1 explores how to enhance the quality of higher education, a key factor for increasing competitiveness and laying the foundations for sustained and inclusive growth. Chapter 2 examines how costly and distorting farm support can be replaced by measures to diversify rural economies.

Recent macroeconomic developments and near-term prospects underscore the main challenges

Mainland output growth continued to slow in 2015, as the large fall in oil prices in 2014 depressed oil-related activity (Figure 4, Panel A). Petroleum-sector investment, which had risen substantially over the past decade, started declining even before the fall in oil prices due to cost-reduction campaigns by the oil industry and the completion of several large projects (SSB, 2015a) (Figure 4, Panel B). Continued low oil prices since mid-2014 have prompted further cost-cutting and reduced capacity (and incentives) to fund new exploration and development projects throughout the oil industry and this has impacted the mainland economy's sizeable sector of oil-related companies, many of which operate globally as well as in the North Sea.

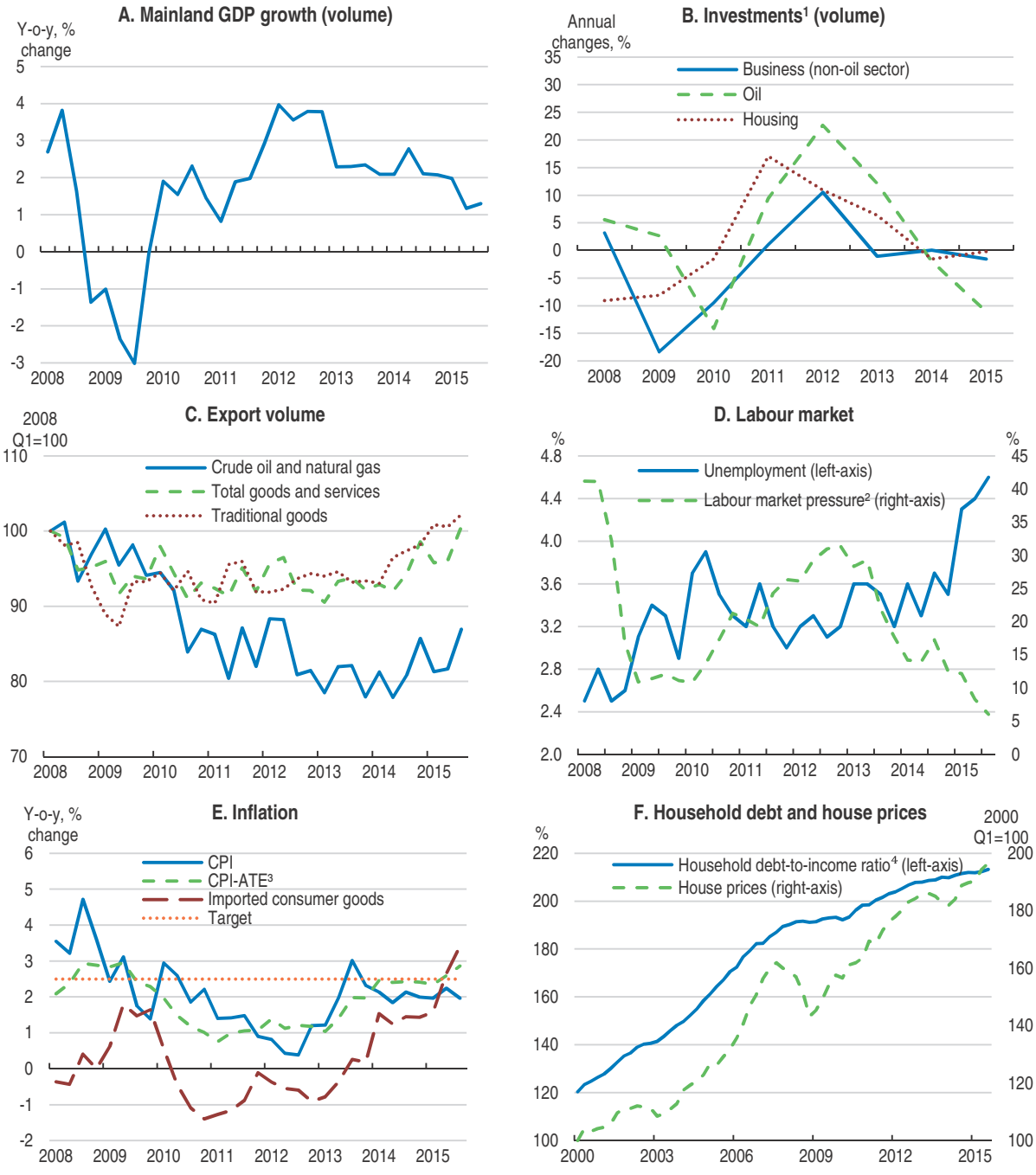
The slowing economy has led to an increase in the rate of unemployment, which went above 4% of the labour force in early 2015 (Figure 4, Panel D). Occupations and regions linked closely to the petroleum sector have been mostly affected (Norges Bank, 2015a). However, consumption is being supported by low interest rates, housing wealth and an expansionary fiscal policy. In addition, low oil prices have brought exchange rate depreciation (Figure 3, Panel A) and slowed wage growth, which is helping competitiveness. Indeed, exports of non-oil goods trended slightly upwards (Figure 4, Panel C). Recent surveys of manufacturing export firms also point to better export prospects (Norges Bank, 2015a). Also, tourism has picked up significantly.

Currency depreciation lifted core consumer-price inflation but the economic downturn is containing inflationary pressures (Figure 4, Panel E). However, house prices continued to rise, though at a more moderate pace, and household debt levels increased to over 200% of disposable income, supported by low interest rates (Figure 4, Panel F).

Economic activity is projected to recover gradually; the latest OECD projection envisages mainland output growth of 1.6% in 2016 and 2.2% in 2017 (Table 1). Accommodative macroeconomic policies, through continued low interest rates and fiscal support, and strong non-oil exports will underpin growth. The government's budget proposal for 2016 envisages a structural non-oil deficit of 7.1% of trend mainland GDP, which represents 0.7 percentage-point increase on the previous year (Ministry of Finance, 2015a). Non-oil business investment is expected to increase as global demand increases, domestic prospects improve and as firms become more competitive. In the petroleum sector, an expected fall in production will dent total export growth in 2016, although new investment projects will partly offset the decline in ongoing projects.

The profile of risks for Norway is complex. Within the macroeconomic scenario described by the central projection, the range of possible outcomes is fairly wide. Many of the risks are external. Oil-sector developments will remain a substantial influence on the range of outcomes around the central projection. Developments in Europe have strong influence on demand for non-oil exports and uncertainties in the pace and timing of recovery will influence developments in Norway. For instance, the strengthening recovery in Europe, if continued, could boost Norway's exports further. In addition, Norway is not immune from the risks emerging in China and geopolitical risks. Also, global financial-market movements have implications for the value of Norway's sovereign wealth fund. Large changes in the fund's value can, in turn, have short-run influence on the economy by affecting fiscal policy because Norway's fiscal rule links to the value of the fund (see below). Among the domestic risks, softening house prices would most likely influence the economy via reduced household consumption growth (this is discussed further below). Overall, there are significant downside risks.

Figure 4. **Recent macroeconomic developments**



1. 2015 annual data are OECD projections.
2. The share of firms reporting that labour supply is a constraint on output growth.
3. CPI adjusted for tax changes and excluding energy products.
4. Ratio of household debt to disposable income. Loan debt for households and non-profit organisations as a percentage of disposable income, adjusted for estimated reinvested dividend income for 2000-05 and redemption/reduction of equity capital for Q1 2006-Q3 2012.

Source: OECD, *Analytical Database*; OECD (2015), "OECD Economic Outlook No. 98 (Edition 2015/2)", *OECD Economic Outlook: Statistics and Projections* (database); Statistics Norway; OECD, *Analytical House Price database*; Norges Bank (2015), *Monetary Policy Report With Financial Stability Assessment*, No. 4/15.

StatLink http://dx.doi.org/10.1787/888933314711

Table 1. **Macroeconomic indicators**

Annual percentage change, volume (2013 prices)

	2012 Current prices (billion NOK)	2013	2014	2015	2016	2017
GDP	2 965	1.0	2.2	1.2	1.1	1.9
Mainland GDP	2 295	2.3	2.3	1.3	1.6	2.2
Private consumption	1 176	2.7	1.7	2.4	1.7	2.5
Government consumption	619	1.0	2.9	2.4	2.7	1.5
Gross fixed capital formation	660	6.3	0.0	-3.5	0.2	2.3
Housing	140	5.3	-1.5	-0.2	1.9	2.5
Business[1]	405	5.1	-1.7	-6.8	-1.4	1.9
Non-oil sector	223	-3.3	-0.4	-1.6	3.4	4.1
Oil sector	185	15.4	-4.2	-11.1	-8.6	-4.9
Government	115	11.7	7.3	3.5	3.0	3.2
Final domestic demand	2 455	3.2	1.6	0.8	1.6	2.2
Stockbuilding[2]	127	0.4	0.5	0.8	-0.6	0.0
Total domestic demand	2 582	3.5	2.0	1.6	0.8	2.1
Exports of goods and services	1 204	-1.7	2.2	2.1	1.8	2.5
of which: Crude oil and natural gas	568	-7.6	1.5	..	..	..
Imports of goods and services	821	4.9	1.5	3.3	1.4	3.1
Net exports[2]	383	-2.0	0.4	-0.2	0.3	0.0
Other indicators (growth rates, unless specified)						
Potential GDP	..	2.2	2.3	2.3	2.3	2.2
Output gap[3]	..	-0.2	-0.3	-1.3	-2.0	-1.9
Employment	..	0.6	1.0	0.6	0.4	0.9
Unemployment rate	..	3.4	3.5	4.3	4.5	4.3
GDP deflator	..	2.5	0.5	-0.9	2.7	2.4
Consumer price index	..	2.1	2.0	2.1	2.4	2.1
Core consumer prices	..	1.5	3.1	2.4	2.6	2.1
Household saving ratio, net[4]	..	7.6	8.5	8.4	8.3	8.3
Trade balance[5]	..	13.5	11.7	..	..	..
Current account balance[5]	..	10.2	9.7	7.1	7.1	7.1
General government financial balance[5]	..	10.8	9.1	6.9	5.5	5.4
Government Pension Fund Global[6]	..	210.0	256.1	267.4	271.1	..
Underlying government primary balance[3]	..	-2.8	-2.8	-3.5	-4.2	-4.2
General government gross debt[5]		34.9	32.7	34.1	36.2	37.9
General government net debt[5]	..	-203.8	-242.0	-249.9	-255.2	-253.5
Non-oil balance[6]	..	-4.9	-6.4	-6.8	-7.6	..
Structural non-oil balance[6]	..	-5.2	-5.8	-6.4	-7.1	..
Structural non-oil balance (% GPFG)[6]	..	-2.5	-2.3	-2.4	-2.6	..
Three-month money market rate, average	..	1.8	1.7	1.3	0.9	0.8
Ten-year government bond yield, average	..	2.6	2.5	1.5	1.4	1.6
Memorandum items:						
Non-mainland GDP (petroleum and shipping)	670	-3.4	2.1	1.2	-0.3	0.0

1. Also includes shipping sector.
2. Contributions to changes in real GDP, actual amount in the first column.
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 trend mainland GDP.

Source: OECD (2015), *OECD Economic Outlook 98 database*; Statistics Norway; Norwegian Ministry of Finance.

The wide range of possible future oil-market developments not only add a range of uncertainty to the central projection but also suggest different macroeconomic scenarios are possible ("vulnerabilities" rather than "risks"). Further drop in the oil price could see substantial cutback in production and demand for oil-related services with an increasing number of North-sea fields falling below operational profitability and greater reluctance to invest in exploration (Table 2). This could trigger more substantial house-price collapse with dramatic consequences for household consumption and financial stability. Conversely, the vagaries of the oil market do not preclude the chance of a large rebound in prices, bringing Norway back to the rewards, and challenges, of strong oil-sector demand and substantial inflows to its wealth fund. In Europe, the possibility of considerable turbulence remains, which could also push the Norwegian economy into a different conjuncture than that described in the central projection.

Table 2. **Possible extreme shocks to the Norwegian economy**

Shock	Possible impact
Oil prices	Low-price scenario. Substantial scaling back of oil and gas related activities, including investment in domestic production and export of oil-related services. Substantial mainland job losses and weakening of income and output. High-price scenario. Increased wealth and incomes but a deepening of the challenges in managing oil wealth.
External demand weakness (turbulence in Europe or wider weakening linked to China)	Downside risks dominate. Weakening mainland output growth, cost-competitiveness remains challenging due to a weak Euro. Upside surprises could help Norway rebalance by creating demand for non-oil exports.
House-price correction	Downward house price correction could see diminished household consumption (due to wealth effects), mortgage defaults and concerns about bank stability with echoes in markets. Further large upward price shocks would increases market tensions and concerns about a market bubble.
Substantial global asset-price adjustment	Downward correction in wealth fund's value, weakening external demand as adjustment filters through to real economy. Further strong growth in wealth fund's value, positive effects on national wealth and incomes in the longer term.

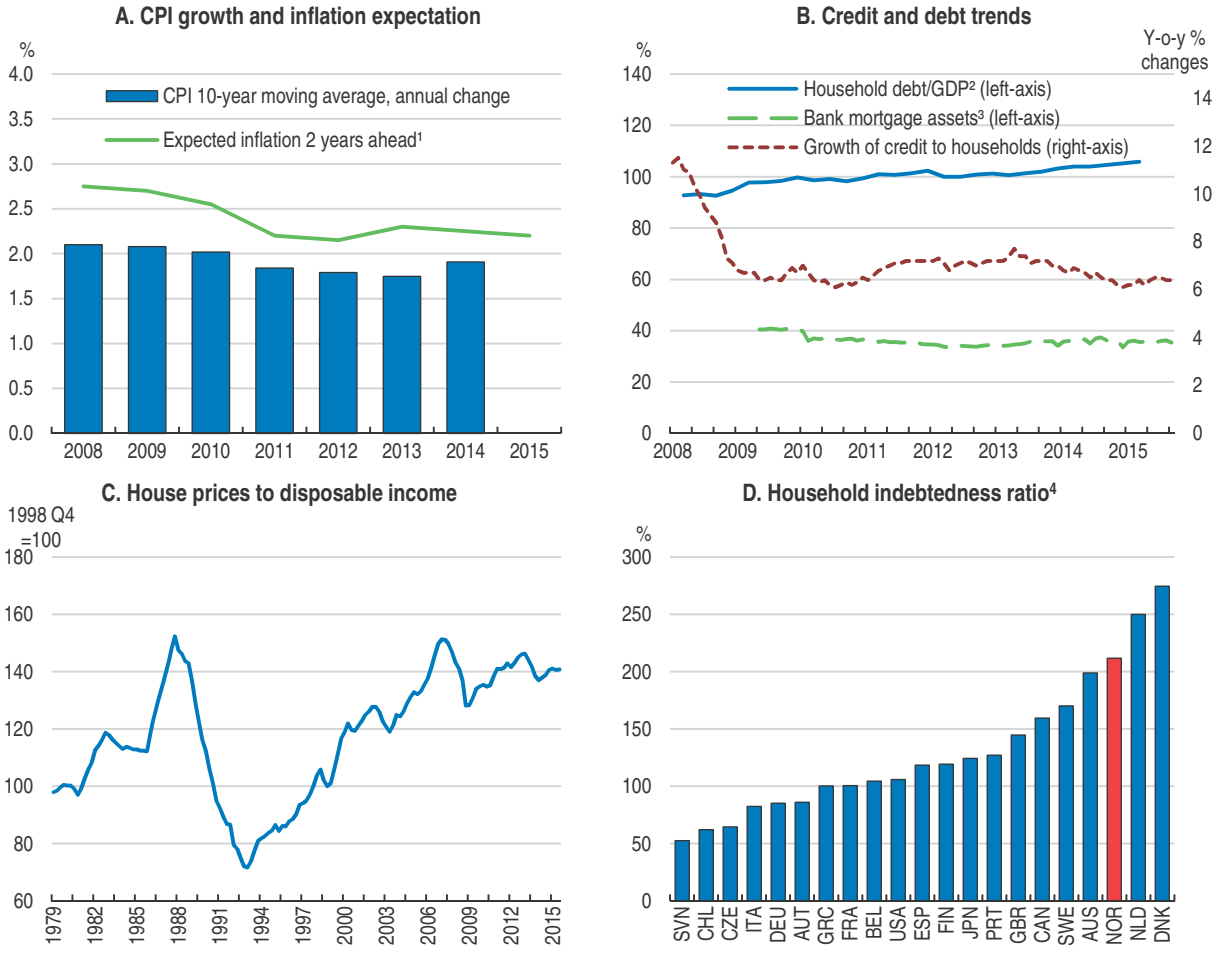
Norway is in a very strong position to handle risks and vulnerabilities, such as those described above. Flexible monetary policy with a floating exchange rate in combination with the wealth fund and fiscal framework reduces exposure to oil-price-related and other risks. And, there is capacity for substantial automatic and discretionary counter-cyclical fiscal stimulus, even while remaining within the bounds set by fiscal rules (see discussion below).

Ensuring price and financial stability

Low interest rates are supporting activity but fuelling the housing market

Norway's flexible inflation-targeting regime has a good track record in delivering low and stable inflation (Figure 5, Panel A). In parallel with many economies, the policy rate has been notched down in recent months; as of September 2015 the policy rate has been 0.75%. Within the current macroeconomic context, both globally and domestically, this further monetary easing has been warranted, reflecting renewed fears about the strength of the global economy generally, and in particular for Norway, in view of the oil-price declines. There remains further room to manoeuvre. Inflation is temporarily boosted by currency depreciation but otherwise is contained by remaining economic slack and inflation expectations appear well anchored (Figure 4, Panel E and Figure 5, Panel A). Monetary policy should therefore remain supportive for some time, but eventually tighten when growth picks up further.

Figure 5. **Inflation, household borrowing and house prices**



1. Average of expectations of employer/employee organisations and economists in the financial industry and academia.
2. Household's gross domestic debt in NOK and foreign currency per mainland GDP.
3. As a percentage of total loans on bank's balance sheets.
4. The total outstanding debt of households as a percentage of gross disposable income of households. Q2 2015 data except for Greece (Q1 2015), Japan (Q1 2014), and the United Kingdom (Q1 2015).

Source: Norges Bank (2015), *Monetary Policy Report With Financial Stability Assessment*, No. 4/15; Statistics Norway; OECD (2015), "Household Dashboard", *OECD National Accounts Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933314725

However, Norway is not immune from the issues and risks that have arisen from prolonged monetary stimulus, including asset-price inflation and greater risk taking as investors seek to offset the very low returns from interest-bearing assets. In particular, low borrowing costs and generous tax-treatment of mortgage interest payments have resulted in mortgage lending growing at a fast pace, and house prices have almost doubled since 2000 (Figure 5, Panels B and C). As a result, household indebtedness is now at over 200% of disposable income (Figure 5, Panel D) a very high ratio, and even higher for young people (Norges Bank, 2015b). In the event of increased borrowing costs (most mortgages are floating rate), the risk of widespread financial instability through household credit defaults is comparatively small, thanks to prudential regulation. However, significant macroeconomic effects may nevertheless emerge through weakening consumption as households economise to accommodate increased mortgage repayments. Life insurance companies and pension funds are facing challenges owed to low interest

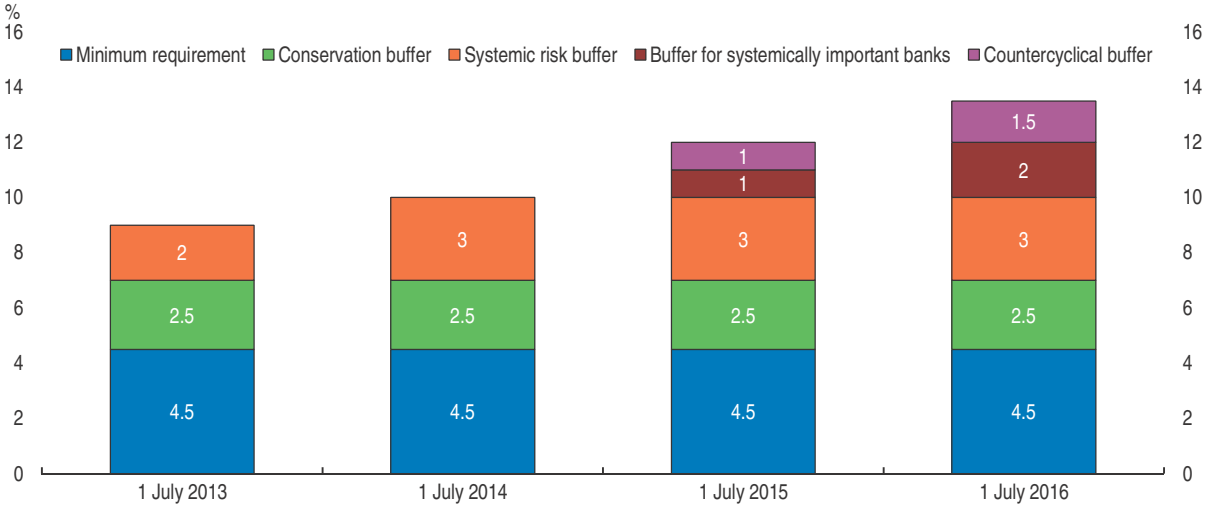
rates and increased longevity. Indeed, in Norway about 80% of life insurers' liabilities include contracts with annual guaranteed returns (Finanstilsynet, 2015), so the low-interest-rate environment makes it more difficult for them to fulfil their long-term obligations.

Capital-requirements and mortgage regulation are being tightened

The 2008 global financial crisis demonstrated that Norwegian banks are vulnerable because of a high share of foreign wholesale funding. The banks weathered the global financial crisis mainly due to substantial liquidity support from the government. The regulators have since been toughening financial-sector regulations in the face of the booming housing market. In banking, measures taken include an early phasing in of Basel III capital requirements, including a counter-cyclical capital-buffer (which is to be increased in size as of mid-2016, Ministry of Finance, 2015b) and implementation of the latest international prudential standards has continued (see annex). Indeed, bank capital requirements have increased substantially in the past two years (Figure 6). Capital requirements are also set to be tightened for insurance companies with the introduction of the Solvency II framework in 2016 (Finanstilsynet, 2015).

Figure 6. **Capital requirements on Norwegian banks**

Common Equity Tier 1 requirements in the new regulatory framework[1]



1. Ratio of Common Equity Tier 1 capital to risk-weighted assets.

Source: Norges Bank (2015), *Monetary Policy Report With Financial Stability Assessment*, No. 2/15.

StatLink http://dx.doi.org/10.1787/888933314736

Macroprudential measures to reduce systemic risks from mortgage lending (and the housing market in general) have also been taken. Regulators have imposed measures to increase risk-weights for mortgage loans in banks that use internal risk models ("IRB banks", typically large banks). Reflecting regional co-operation in banking the Swedish and Danish financial supervisory authorities have announced that host country regulation on this issue will apply to their bank branches in Norway. This is particularly useful given the degree of interconnectedness in the Nordic banking market. Stricter lending guidelines on residential mortgages in Norway were introduced in 2011, recommending a cap on the loan-to-value ratio at 85% (and 70% for home credit equity lines) and require an assessment whether

borrowers can service debt in the event of a 5 percentage-point interest-rate hike. The cap was made compulsory from 1 July 2015, yet allowing for a maximum of 10% of approved mortgage loans per quarter to be loans that do not fulfil these rules (a so-called speed limit) (Ministry of Finance, 2015c; Norges Bank, 2015a). These new regulations will be continuously assessed in light of developments in the housing market, household borrowing, and the impact on competition between lenders. They are part of a wider housing-market strategy that also addresses supply constraints, for instance through simplification of housing-construction regulation. These measures are welcome, though the authorities should also consider lowering the speed-limit provision. In addition, as mentioned in past *Surveys*, reduction in Norway's strong tax-advantages in home ownership would also help cool the housing market.

Getting the fiscal rule right, ensuring efficient tax and public spending

Avoiding pro-cyclicality with the fiscal rule

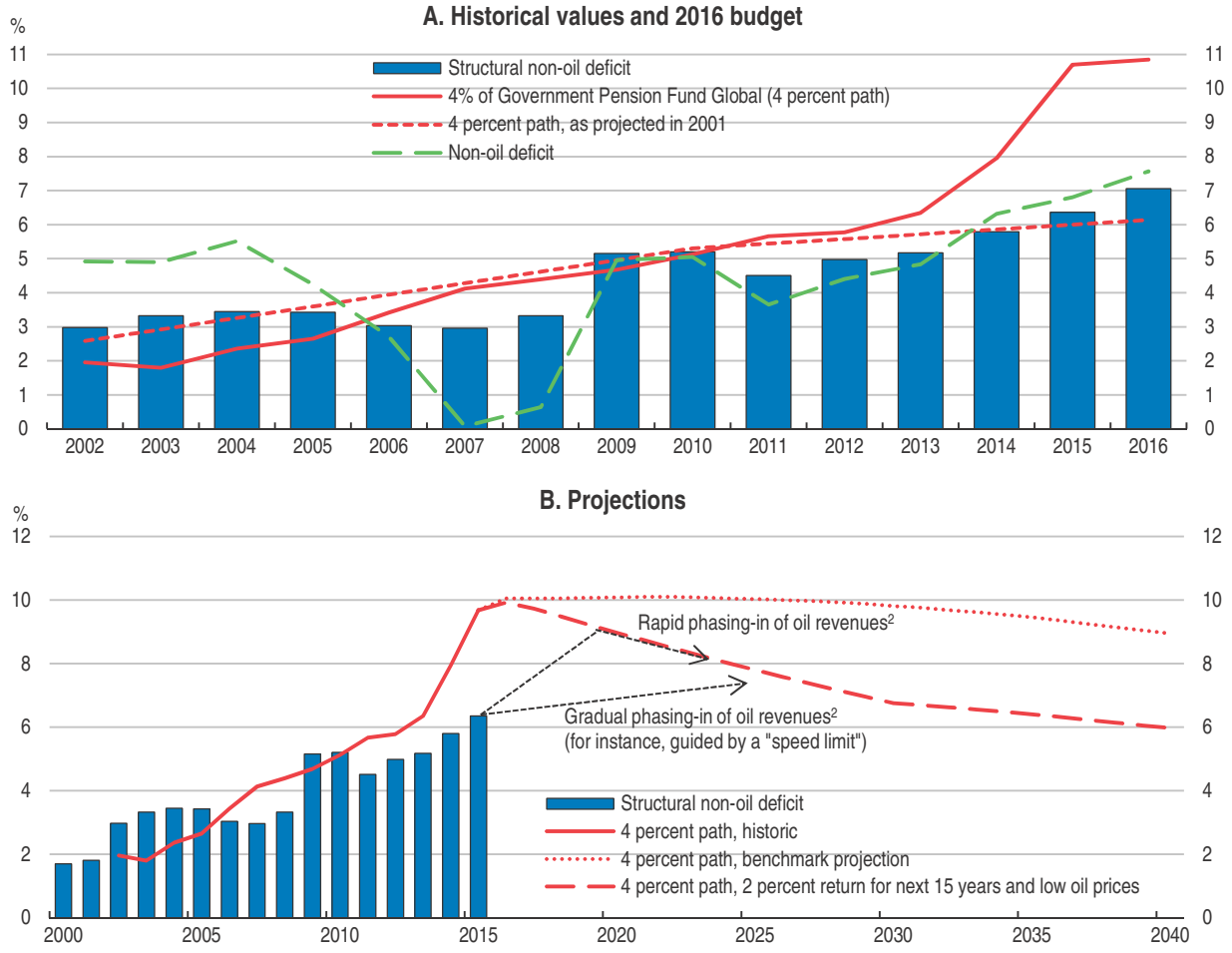
Norway's fiscal-policy framework channels all revenue (from taxation or ownership) from the oil and gas sector into a sovereign wealth fund (the Government Pension Fund Global, GPFG) which is invested entirely in foreign assets abroad. A fiscal rule limits the structural deficit to an amount equal to 4% of the value of the GPFG, with allowance for deviations. Conceptually, the rule implies an intergenerationally "fair" use of Norway's oil wealth, since each generation spends only the real returns on the GPFG (by assumption, 4% – so far the rate of return has been close to this) thereby preserving the real value of the fund for future generations when there is no more oil.

Growth in the value of the fund has been rapid in recent years, and at times, the fund's growth has implied that a full drawdown of 4% would mean excessively expansionary (pro-cyclical) mainland fiscal policy. Accordingly, in recent years in particular, the authorities have run non-oil structural deficits that are well below that implied by a 4% drawdown (Figure 7, Panel A). For instance, the structural non-oil deficit of 7.1% of mainland trend GDP envisaged by the 2016 budget represents only 2.8% of the capital in the GPFG.

With the "allowable" deficit according to the 4% rule (or "4 percent path") substantially above the actual deficits, the question arises whether some adjustment to the rule is required. A key consideration is illustrated by the Ministry of Finance's latest projections, which show that under assumptions of only a 2% real return on the fund and a low oil price that the 4 percent path will start declining from 2015 onwards (Figure 7, Panel B). Moving rapidly back to the 4% path could therefore mean some years of fiscal expansion followed by contraction (Figure 7, Panel B). To avoid this it would appear sensible to smooth the deficit path for the next several years. To help enforce this, a government commission has suggested a more gradual phasing in of oil revenues than that of recent years. Specifically, it recommends that when deviations from the 4% path are large, as in the present situation, the government should chart an explicit course to gradually return to the path (Ministry of Finance, 2015d). It has suggested guidelines that set a speed limit on structural deficit expansion, which would have this effect without opening up the rule itself. This is a welcome initiative, especially in light of pressures from population ageing.

Figure 7. **Fiscal balances and the wealth fund**

As a percentage of mainland trend GDP[1]



1. Data for 2015 onwards are projections.
2. The arrows represent indicative potential deficit paths, not formal projections.

Source: Norwegian Ministry of Finance (2015).

StatLink http://dx.doi.org/10.1787/888933314741

Scaling back the overall tax burden and changing the tax mix to boost growth

Norway's tax burden remains among the highest in the OECD, at around 45% of GDP (excluding petroleum-related revenues) with a heavy emphasis on income taxation (Figure 8, Panels A and B). This limits the economy's capacity for diversification and its international cost competitiveness. As in the other Nordic counties, the substantial tax burden reflects a societal choice of comprehensive public services, such as in childcare, health, education and welfare. However, in Norway there is substantial scope for improved cost-efficiency in public spending and a degree of fiscal space, so scaling back the tax burden would not necessarily mean sacrifices in either the breadth or quality of public services. The government is putting a strong emphasis on reducing the tax burden, in particular for corporations.

Norway's overall tax structure should be better tuned to encouraging business enterprise and productivity growth by a shift away from income taxation and towards indirect taxation. As argued in many *OECD Economic Surveys*, indirect taxes are preferable to

Figure 8. **Norway's tax burden is relatively high**

1. Norway: non-oil tax revenue as percentage of mainland GDP. 2014 data except for Australia, Japan, Poland and the Netherlands which take 2013 data.
2. Rates based on OECD Taxing Wages models for the case of two-earner married couple, one at 100% of average earnings and the other at 67% with 2 children. 2014 data.
3. Combination of central and sub-central government taxes. 2015 data.

Source: OECD (2015), "Revenue Statistics: Comparative tables", *OECD Tax Statistics* (database); OECD (2015), "Taxing Wages: Comparative tables", *OECD Tax Statistics* (database); OECD (2015), "Corporate income tax rate", *OECD Tax Statistics* (database); Norwegian Ministry of Finance.

StatLink http://dx.doi.org/10.1787/888933314757

direct taxes in that they favour saving and investment and have a smaller impact on business costs and profits and on work incentives compared with corporate-income tax and personal-income tax (Arnold, 2008; Johansson et al., 2008). Any such shift in the tax mix may require attention to effects on the distribution of disposable incomes arising from greater use of indirect tax.

Some steps along these lines have already been taken. In particular, the rate of corporate taxation has already been reduced from 28% to 27% (the flat-rate component of personal income tax, the "ordinary tax" on household income has been reduced in parallel). A further cut, to 25%, is slated for 2016 (again with a parallel cut in the ordinary rate of personal income taxation), which will bring the rate down to the OECD average (Figure 8, Panel C). The government's white paper on tax reform, presented together with the 2016 budget sets a goal of reaching a rate of 22% by 2018. Reductions in the corporate tax rate should be considered in combination with corporate tax base broadening, Two important measures to broaden the tax base are: i) new limitations to counter base erosion and profit shifting; and ii) to make the depreciation rates for tax purposes more in line with the actual economic depreciation. Momentum for these moves was helped by a tax commission that suggested bringing the corporate-income and ordinary-income tax rate down to 20%.

Furthermore, inheritance tax has been cancelled and the tax on household net wealth has been reduced from 1.1% to 0.85% (as of 2015). These reductions avoid the potential for very high effective rates of taxation on some forms of saving. Calculations made by the Ministry of Finance for the 2012 *Survey*, found that the 1.1% rate effectively doubled the effective tax rate on real income from interest-bearing assets and shares, from 56% to 113%. Calculations based on the new rate show the effective rate on these assets is now 98% which is still very high, and therefore proposals for further reduction outlined in the government's budget for 2016 are welcome.

While Norway's tax system is uniform in some respects (notably, the rate of corporate tax on business and that on "ordinary income" on households is the same), it falls short of best practice on others. With regards to value-added tax (VAT), the government's budget for 2016 includes a welcome proposal to increase the 8% VAT rate to 10%. Such moves reduce distortions and allow reductions in other tax rates and further steps towards a single rate of VAT on all goods and services would be welcome. In housing, notably the system allows tax deduction of mortgage interest but does not tax imputed rent as income. This needs to be rectified either by introducing imputed rent or a proxy for it, for instance by raising property tax on real estate. Or, if neither of these solutions are possible, consideration should be given to dropping the interest allowance.

Uniform tax treatment in a broader sense requires removing loopholes and mechanisms that enable some business and households, often through aggressive tax avoidance, to enjoy far lower taxation than others. On this issue, as elsewhere, the Norwegian authorities are paying particular attention to base erosion and profit shifting (BEPS) by companies. Indeed, this was among the key issues examined by the Tax Commission. Cross-border tax arrangements exploiting Norway's relatively generous debt-interest rules are of particular concern. In 2014, Norway introduced new rules intended to tackle BEPS involving interest and the Commission has suggested, *inter alia*, further changes that would make these rules stricter. For example, the Commission proposed that interest limitation rules be extended to include all of a company's net

interest expense (existing rules apply only to related party interest). It also proposed that the *de minimis* threshold, below which the rules do not apply, be reduced from net interest expense of NOK 5 million to NOK 1 million. Both of these changes should strengthen Norway's rules for dealing with BEPS involving interest. Implementation along the lines of the Commission's proposals is already underway, interest-deduction limitation will be tightened in 2016 and further changes are proposed in the government's white paper on tax reform. In addition the government has begun implementing several adjustments to prevent profit shifting in multinational companies based on recommendations from the Tax Commission and BEPS-reports from the OECD.

Norway has been among the first countries to re-shape existing taxes and bring in new ones to address environmental issues. For instance, the government's budget for 2016 proposes a road usage tax on natural gas and liquid petroleum gas (LPG). Nevertheless, there are issues, for instance the implicit rates of tax on carbon still vary widely across tax bases (environmental policy is taken up below).

More efficient public spending

Public-spending efficiency gains could reduce tax burdens, and make a sizeable difference to overall productivity given that government services and investment account for about one third of total mainland output. Efficiency gains are also required to address pressures from population ageing. Past *Surveys* have drawn particular attention to problems in compulsory education (for instance, OECD, 2008), health care (OECD, 2010) and sickness and disability benefit (OECD, 2010), and this *Survey* identifies issues in higher education (Chapter 1) and in agricultural support (Chapter 2). The 2016 budget aims to shift the composition of public spending towards infrastructure and education, with savings aimed in public administration. The finally agreed budget for 2016 made adjustments to accommodate costs related to the unexpected acceleration of incoming asylum seekers. The adjustment of the budget is equivalent to about 0.3% of GDP and comprises revenue and expenditure measures that do not affect the overall planned deficit. Accommodating the fiscal costs of further inflows should also endeavour to avoid excessive fiscal expansion (as discussed above).

Given the wide range of public services assigned to counties and municipalities in Norway, it is important that sub-national governments are assisted and encouraged to improve efficiency and quality. Chapter 2 of this *Survey* draws attention to challenges in service provision for Norway's numerous small municipalities. Nearly 130 of the 428 municipalities have populations of less than 2 500. Jurisdictions on this scale can find it difficult to deliver services, largely due to lack of economies-of-scale. A key difficulty is that small municipalities cannot easily attract and retain specialist staff. Also, small municipalities often engage in co-operation arrangements with other municipalities for the provision of services. These usually reflect well-intentioned efforts to exploit economies of scale but for many municipalities the number and complexity of the arrangements has become difficult to manage. Moving up to a larger scale of operation would help, and therefore efforts to encourage mergers between municipalities, such as the one currently underway which includes financial incentives to merge, can only be encouraged.

Past *Surveys* have underscored that Norway has room for greater private provision in the supply of public services (for instance through outsourcing) including in areas such as health and education (OECD, 2012 and 2014a), and through larger private contributions to the financing of such services. The government has already made the tax treatment of VAT

for central-government services neutral as between public and private providers (the same is due to come into force for hospital services in 2017), which will help achieve the first of these objectives. As in other countries, systems for increasing private provision need to be carefully designed, for instance to control the quality of services provided. In addition, advance in the management of road-building programmes has been made with formation of a public company to plan, construct and operate specific parts of the national road network. In the past, the road-building project selection process has been criticised for picking the projects that do not rank well in terms of cost-benefit analysis. The new system however does not endeavour to rectify this part of the challenge as the company is confined to plan and construct a set portfolio more efficiently. Also, the government has detailed a new framework for public-private partnerships (PPPs) in infrastructure development that has a welcome focus on assessing the overall benefits of PPP, rather than viewing PPPs, for instance, as a vehicle for reducing near-term fiscal outlays. These efforts to strengthen infrastructure-project processes are particularly welcome in Norway as oil-wealth can bring intense pressures to embark on ambitious public investment projects.

Among the specific public-service issues, co-ordination challenges in health care are particularly prominent. In the context of efficient and good quality services in rural areas (Chapter 2) this *Survey* draws attention to the issues arising from the division between the provision of primary care by municipalities and secondary care services by regional health authorities operating under central government. Changes made in 2012 (the Co-ordination Reform) have helped, but additional measures, such as new information infrastructure and capacity building in municipalities, are required.

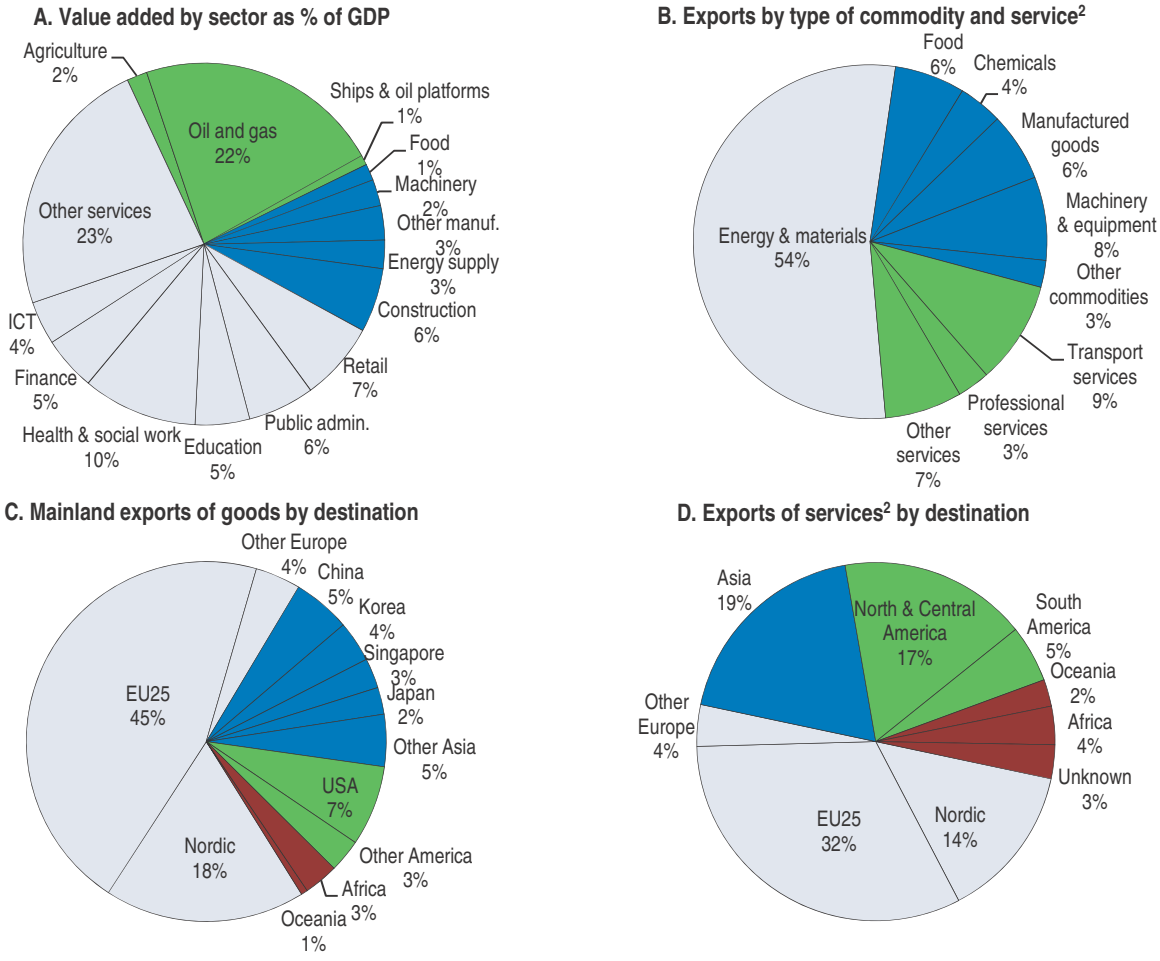
OECD analysis (for instance, the *Value for Money review*, OECD, 2013a) has suggested adoption of a medium-term expenditure framework, rather than relying only on projections of future spending, to guide medium-term planning. Several OECD countries have already taken this approach. Time horizons vary (for instance, three years in Sweden, four in the Netherlands and five in the United Kingdom). So does the degree to which spending allocations are binding. For example, in France, Sweden and the Netherlands budget allocations are strongly locked in (OECD, 2012). The extent to which medium-term expenditure budgeting is applied across spending areas also varies, though it is common to exclude "entitlement spending", such as on pensions and social benefits. The government should carefully assess the pros and cons of adopting a medium-term expenditure framework in light of the report of a recent commission on this issue.

In-depth examination in the 2012 *Survey* suggested the use of efficiency dividends (i.e. reductions spending allocations in relation to baseline with a view to encouraging departments to find efficiency improvements in service delivery) and independent "spending reviews". In 2015, the government introduced such dividends on all operational spending at the state level and these are being maintained in the 2016 budget. A plan to introduce an independent public-spending efficiency unit has been around for some time (one proposal was discussed in the previous *Survey*), but such a unit has yet to be established. However, the government has established an information and communications technology (ICT) Council for assessing new plans for small- and medium-sized ICT projects in the central government. Assessing the efficiency of government services implies that in some way inputs can be gauged against outputs. As elsewhere, measurement of the latter for many public-sector activities remains particularly challenging and efforts to improve the scope and accuracy of output indicators can only be welcomed.

Boosting productivity through a more supportive business environment and stronger competition

Going forward, the structure of Norwegian economic activity (Figure 9) will most likely shift away from petroleum-related activities. Domestic oil production is already declining and opportunities for exploration activity (both domestically and globally) will trend downwards as the number of likely locations for new economically viable reserves diminishes. There are already long-established non-oil sectors, such as shipping and energy-intensive activities that tap into Norway's substantial sources of hydropower (for instance, aluminium smelting and fertiliser production). However, these only account for a small share of non-oil activity. As in many other countries, Norway's economic activity has become dominated by a wide range of service sectors (Figure 9). Furthermore, export destinations have become increasingly global. Given the diversity of activities, and risks predicting which sectors will flourish in the future, ensuring supportive conditions and competitive environments for all forms of business activity needs to be a core theme of policy.

Figure 9. **Norway's economic structure**[1]



1. 2014 data.
2. Includes only non-financial enterprises.

Source: Statistics Norway.

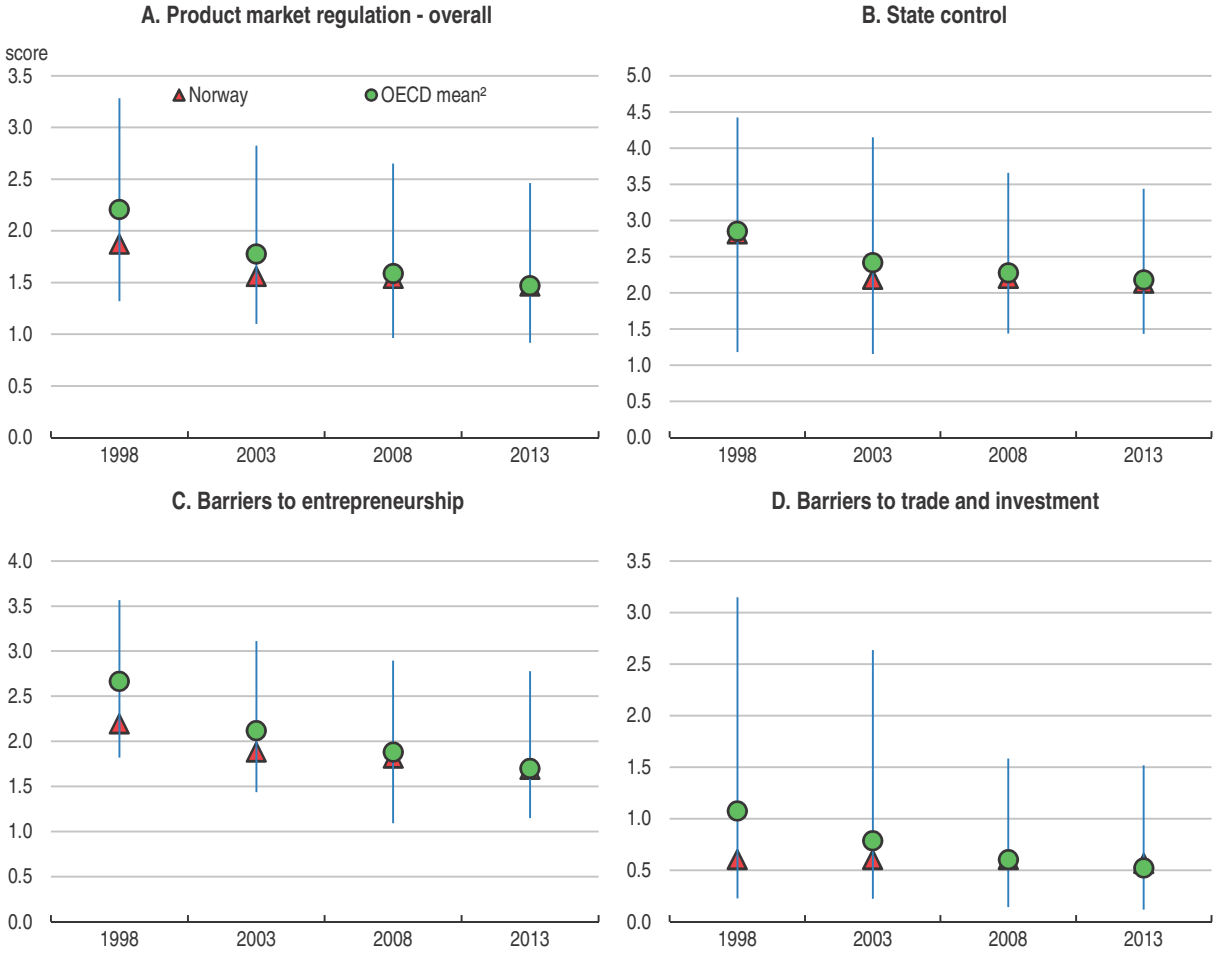
StatLink http://dx.doi.org/10.1787/888933314763

Framework conditions: Further advances in tax, red tape and innovation support are being made

Given the cost-competitiveness challenge faced by Norway's mainland business sector, policy needs to strive towards supportive framework conditions on other fronts to enhance overall competitiveness and improve productivity. As discussed above, Norway's statutory corporate tax rate does not compare well in international comparison; further cuts along the lines suggested by the Tax Commission would be welcome. However, attention is required in other policy areas too, in particular red tape and innovation and entrepreneurship.

The OECD's product-market regulation measures suggest that Norway compares reasonably with other countries, and has been cutting back barriers to business, but more slowly than elsewhere (see Figure 10, in particular Panel C, "Barriers to Entrepreneurship"). This underscores the need to expedite changes towards lighter and more efficient processes and regulations in the interfaces between business and government. The government is giving priority to this. New features in the institutional framework of

Figure 10. **Norway is losing ground on the OECD's product-market-regulation (PMR) indicators**[1]



1. Scores potentially range from zero to 6 and increase with restrictiveness.
2. OECD mean is depicted on a line connecting the minimum and maximum values within OECD.

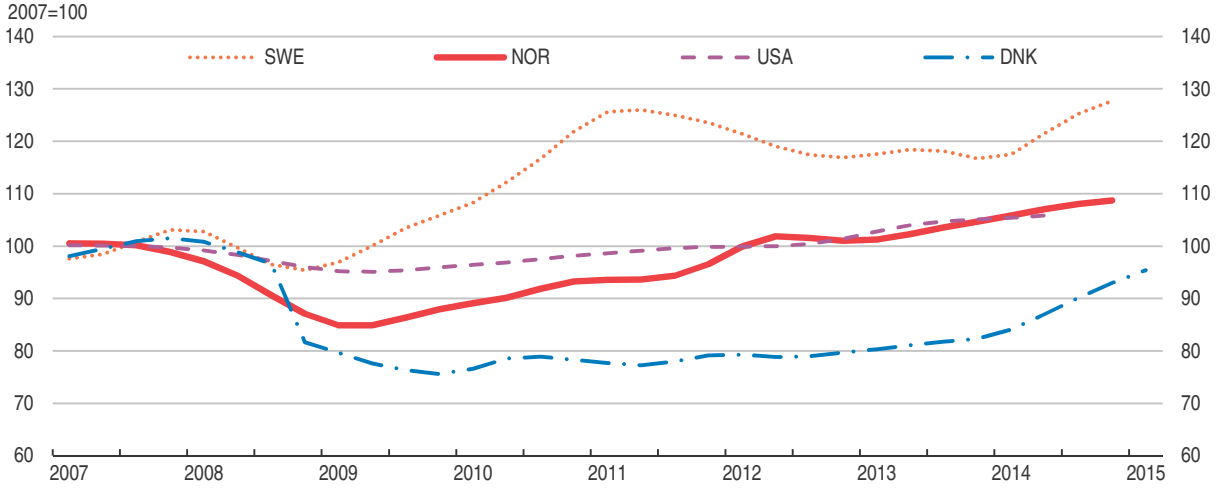
Source: OECD (2015), "Economy-wide regulation", *OECD Product Market Regulation Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933314777

red-tape reduction include the establishment of a "better regulations council" along the lines of that introduced in Sweden (Government of Norway, 2013). Red tape reductions implemented so far (or in the pipeline) include lighter reporting requirements for employers to the social-security authorities, simplification in building and planning legislation and simplified tax rules for business partnerships.

Encouraging innovation and entrepreneurship can help deepen the diversity and flexibility of Norway's mainland economy and so enhance capacities to absorb oil-related shocks and strengthen the growth potential and productivity potential of the economy. New enterprise creations have been picking up in Norway (Figure 11), which is encouraging. Past OECD reviews have praised use of competitive tenders for distributing research and development (R&D) support and the 2015 Budget increased support via the core programme, *Skattefunn*. At the same time, however, the number of individuals qualified in STEM (science, technology, engineering and mathematics) subjects remains a concern, and there is room to strengthen university-business links. The government has launched an evaluation of this issue, including whether technology transfer offices (established to identify and encourage academic research with commercial potential) require more powers. In addition, in-depth assessment of entrepreneurship in the 2014 *Survey* suggested business-type skills also needed attention, such as risk assessment, people management, project planning and finance. However, challenges to tax control and monitoring need to be addressed.

Figure 11. **New enterprise creation, trend cycle**[1]



1. An enterprise creation generally refers to the emergence of a new production unit. This can be either due to a real birth of the unit, or creations by mergers, break-ups, splitoffs or through the re-activation of dormant enterprises. The concept of enterprise creation may differ across countries. The trend-cycle reflects the combined long-term (trend) and medium-to-long-term (cycle) movements in the original series.

Source: OECD (2015), *Entrepreneurship at a Glance 2015*, Figure 1.1.

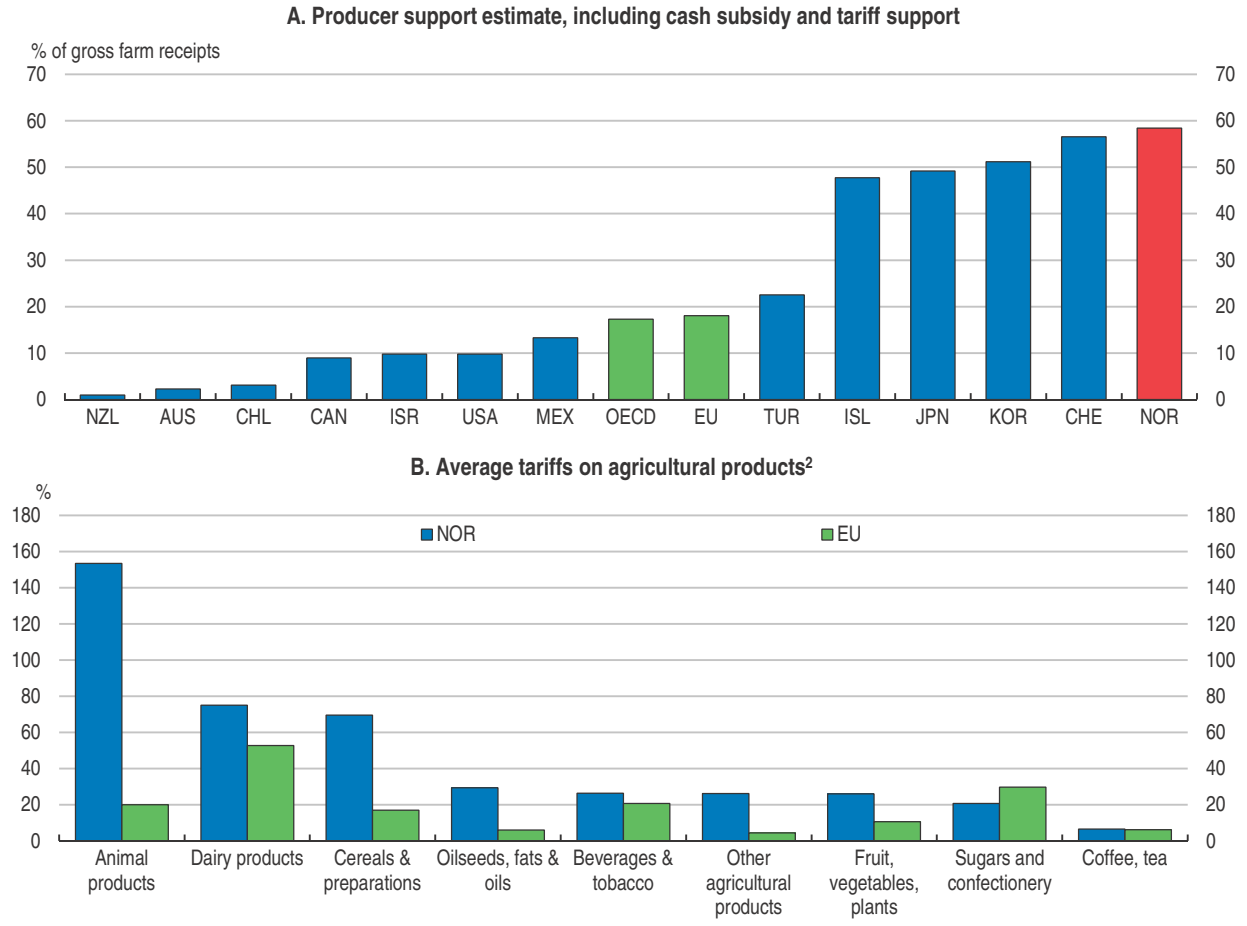
StatLink http://dx.doi.org/10.1787/888933314783

Agricultural reform is needed to make rural economies sustainable

Current policies and mechanisms focus heavily on preserving the current structure of rural economies, especially in the case of agriculture. Policy goals and mechanisms need to be clearer, less focussed on preservation of the *status quo* through subsidy and more channelled towards encouraging change that helps rural communities thrive in the long run. Encouraging sustainable economic activities (farming or otherwise) is key.

Substantial protection of the agriculture sector remains through high import tariffs on raw ingredients and processed food and generous cash subsidies for farmers (Figure 12 and Chapter 2). The numerous import tariffs include one close on 450% on some milk imports, and there are around 100 cash support mechanisms for farmers, many providing payments directly linked to output or inputs. Also, legislation gives farmer-controlled processing and distribution co-operatives (for instance a single co-operative dominates dairy-product distribution) special powers in market regulation. The agricultural sector is exempt from standard competition legislation.

Figure 12. **Norwegian agricultural support is among the heaviest**[1]



1. 2014 data.
2. Average Most-Favoured Nation (MFN) tariffs, which are the standard rates charged on imports from all WTO members, excluding preferential rates, or lower rates charged within quotas.

Source: OECD (2015), "Agricultural support estimates (Edition 2015)", *OECD Agriculture Statistics* (database); WTO (2014), "World Trade Profiles 2014".

StatLink http://dx.doi.org/10.1787/888933314794

These high levels of support are likely to become increasingly untenable over time. External pressure for Norway to decrease its import tariffs on agricultural imports is unlikely to diminish. Domestically, the increasing need for a more productive non-oil economy as petroleum-related activities wane, will likely see heavily subsidised sectors come under greater scrutiny. In short, agricultural policy needs to help prepare producers for change, guiding them towards more sustainable and competitive production.

The government has already lowered disincentives to the formation of larger production units by raising some of the ceilings on support and production per farm, and it aims to reduce the protection for farmers embedded in legal regulations of the agricultural property market. However, there remains much more to be done. Import tariffs and cash subsidies should be put on a downward trajectory, cultural and environmental support need to be better linked to objectives and more steps are needed to liberalise agricultural property market legislation. In addition, the system of annual negotiation between government and farmer representatives requires review; the system is not without merit, as any agreement means buy-in from the farming unions and therefore comparatively few problems in implementation, however the negotiation tends to preserve (and errs towards extending) the subsidy system.

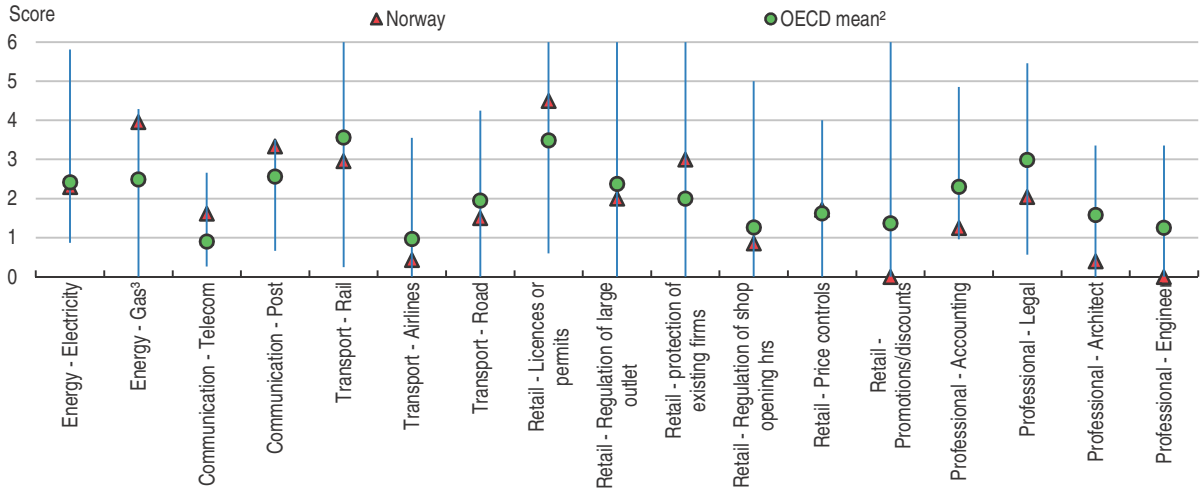
Reforms of regulations and institutional settings would strengthen competition

Various aspects of Norway's competition legislation could be strengthened to improve enterprises' incentives to seek and exploit efficiency and productivity improvements. Exemptions from the Competition Act not only apply in agriculture but also to fishing and book retailing. Norway's competition policy takes a "total welfare" approach to assessing markets, for instance in the case of prospective mergers. This is sound in principle as it aims to maximise overall economic surplus by considering all gains and losses but concerns have been raised that it may be allowing too many deals that risk limiting competition to go ahead (Productivity Commission, 2015; OECD, 2014a). Among the positive policy developments, following concerns about conflict of interest the government has proposed to remove the role of the Ministry of Trade, Industry and Fisheries as the appeal body in competition cases and establish a new independent appeal body. Also, the government has made welcome proposals that would lighten Sunday retailing restrictions. Past OECD reports (OECD, 2014a) have recommended increasing the power of the competition authority and Norway's Productivity Commission calls for a systematic review of competition.

State ownership of business enterprise in Norway has diminished, but nevertheless remains extensive. Around 285 000 people, or 11% of employees are employed in companies with partial or complete state ownership (IMF, 2014). Economically, the most significant holding is the 67% state stake in the oil and gas conglomerate, *Statoil ASA*. Other sectors with substantial state stakes include, notably telecoms (*Telenor*), energy and aluminium production (*Norsk Hydro*), chemicals (*Yara International, ASA*), a manufacturing conglomerate (*Kongsberg Gruppen*) and banking (*DNB Bank*). The control and regulation implied by state stakes is echoed in OECD sectoral indicators (Figure 13). The frameworks for administering state-ownership are in many respects exemplary. For instance, the state ownership operates on a set of governance guidelines that are in line with generally accepted good practice. However, this does not necessarily justify retaining stakes and it is encouraging that the current government intends further partial or complete sell-offs in a number of companies (see annex).

Competitive market models are operating reasonably well in telecoms and electricity, the latter in large part thanks to participation in an integrated open market with other Nordic countries (Figure 13). As in many countries, rail and postal services have only been partially liberalised. Encouragingly, however, the government plans on bringing change to both sectors (see annex). Figure 13 points to a mixed picture outside the network industries. It underscores that some aspects of retail are indeed quite restrictive but

Figure 13. **OECD indicators of regulation in non-manufacturing sectors**[1]



1. Scores potentially range from zero to 6 and increase with restrictiveness.
2. OECD mean is depicted on a line connecting the minimum and maximum values within OECD.
3. Gas sectors in Norway include upstream activities, which may face different regulatory issues from those mainly involving downstream activities.

Source: OECD (2015), "Sectoral Regulation", *OECD Product Market Regulation Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933314802

meanwhile professions appear comparatively liberalised. Policy may be helped by the strengthening of assessment methodology, for instance through adopting approaches described in the OECD's Competition Assessment Toolkit.

Boosting output and inclusiveness by improving skills and encouraging labour supply

Workforce skills, education and incentives encouraging labour-force participation are key to good framework conditions for business and productivity but also important for household well-being. In some segments of the Norwegian labour market flows of workers from other EEA countries (notably Poland) have filled gaps created by strong demand. Indeed, these have almost certainly helped the economy sustain a higher level of activity. However, inflows and outflows of workers cannot resolve all imbalances and improving the skills among the domestic population needs to be a priority. In this regard, institutional frameworks and policy settings on these dimensions are sound for the main part, and Norway is undertaking an innovative "skills strategy" initiative (Box 1).

Education reform towards greater quality and efficiency

As underscored in previous *Surveys*, student skills in primary and secondary education are not outstanding, but spending is comparatively high. Norway's overall PISA score is middle ranking among OECD countries while spending per student (on a purchasing-power parity basis) in primary and secondary schools ranks third highest (OECD, 2014b) (Figure 14). Furthermore, completion rates are weak in many vocational upper-secondary education courses; which is partly a positive sign of job-opportunity, but also reflects problems in the vocational-course system (OECD 2014a). The latest campaign to improve primary and secondary education centres on a programme (*Promotion of the status and quality of teachers – joint effort for a modern school of knowledge*), whose goals include increased

Box 1. **Norway's National Skills Strategy project**

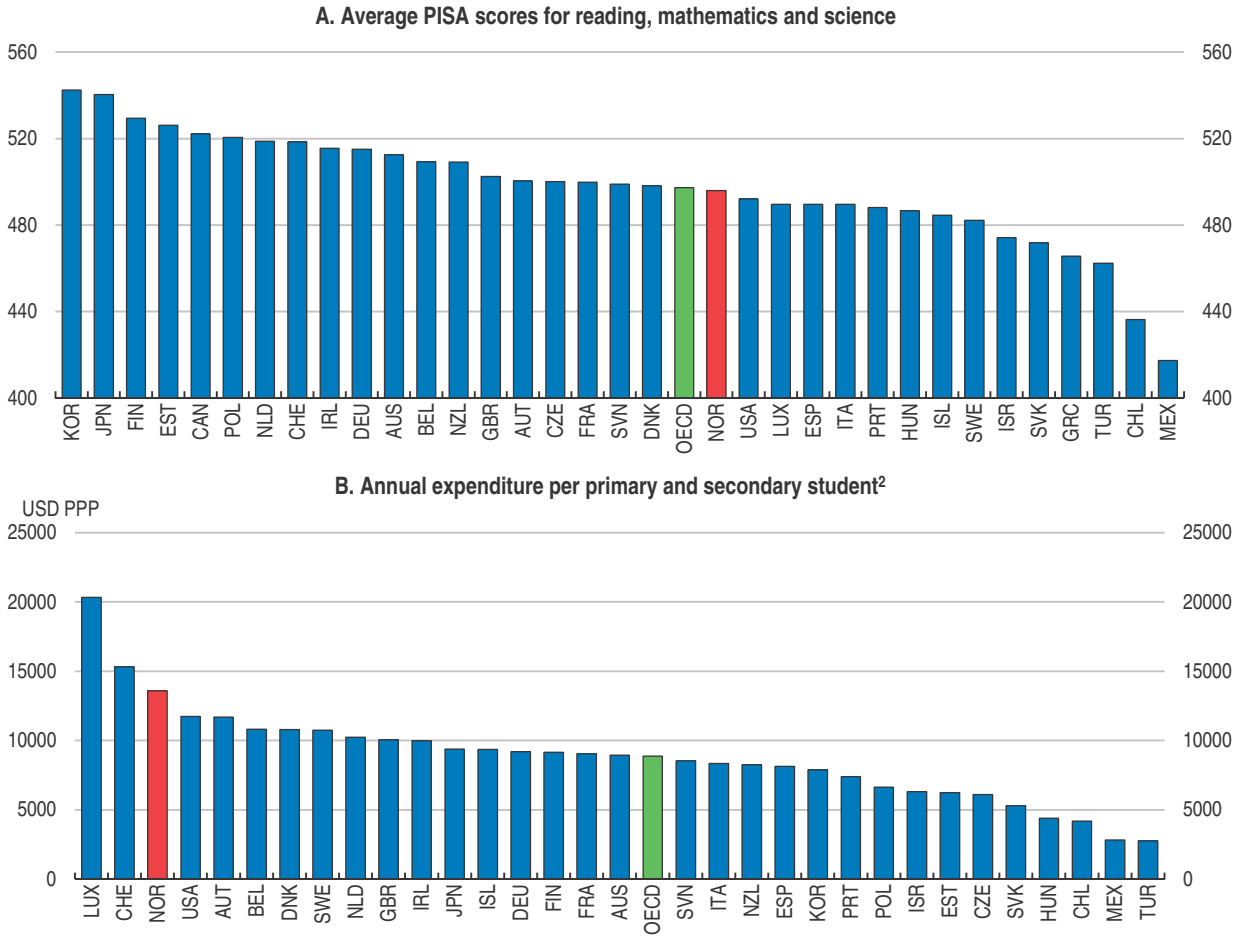
Recognising that the country will need to maximise its human capital and skills if it is to move beyond a longstanding reliance on natural resources and ensure inclusive growth in the future, Norway was the first OECD member country to undertake a national skills strategy project in 2013-14. Using the OECD Skills Strategy framework, the diagnostic phase identified a set of 12 skills challenges spanning the entire skills system of developing, activating and using skills. The report found that Norway would develop more relevant skills by: ensuring strong foundation skills for all, reducing drop-outs, and informing educational choices. That activating the supply of skills would be boosted by: enhancing labour market participation among those receiving disability benefits, encouraging labour market attachment among low skilled youth; and ensuring Norwegians remain active longer. More effective use of skills could be achieved by: engaging employers in ensuring a highly skilled workforce; promoting entrepreneurship and enhancing the use of migrant worker skills. Finally, the effectiveness of Norway's overall "skills system" would be strengthened by facilitating a whole-of-government approach to skills; ensuring local flexibility and adaptability for nationally designed policies; and building partnerships at the local and national level to improve implementation (OECD, 2014b).

The Skills Strategy project was characterised by close collaboration with an inter-ministerial project team (including representatives from education, labour, trade and industry, local government and modernisation, and finance) as well as by extensive stakeholder engagement through a series of interactive workshops in Oslo, Drammen and Mo I Rana. Building on the diagnostic phase and input from a range of stakeholders (including employers, trade unions, education providers and students), the project then went on to identify 5 main actions for Norway to pursue: set up a "Skills Strategy for Norway" incorporating a whole-of-government approach; establish an action plan for continuous education and training; strengthen the link between skills development and economic growth; build a comprehensive career guidance system; and strengthen incentives for people to move into shortage occupations (OECD, 2015). Full implementation of these actions would contribute to addressing Norway's need to raise productivity, innovation and competitiveness while fostering social inclusion.

support for teachers to continue education and the introduction of 5-year master's-level degree for new entrants to the profession. The outcomes of these measures should be monitored and adjusted as required. Also, despite some progress, transparency on performance could be greater; results could be made more readily available.

Chapter 1 of this *Survey* finds that Norway's tertiary education system has encouraged participation and generated high attainment rates. Research activity also increased substantially in recent years (Figure 15, Panel E). However, some indicators point to quality issues and room to improve outcomes. Recent results from a national student survey of higher education (*Studiebarometeret*) reveal relatively low levels of satisfaction in some critical areas of learning outcomes, such as experience with research and development work and innovative thinking (Figure 15, Panel A). Moreover, the Survey of Adult Skills (a product of the OECD Programme for the International Assessment of Adult Competencies, PIAAC) shows that around 10% of 20-34 year-old tertiary graduates in Norway attain only low levels of literacy (level 2 or below) (Figure 15, Panel B). While this finding may also reflect, among other things, shortfalls at earlier stages of education, and Norway fares

Figure 14. **Norway's educational performance falls behind its investment**[1]



1. 2012 data.
2. Average of primary and all secondary institutions.

Source: OECD (2014), *PISA 2012 Database*; OECD (2015), *Education at a Glance 2015*, Table B1.1a.

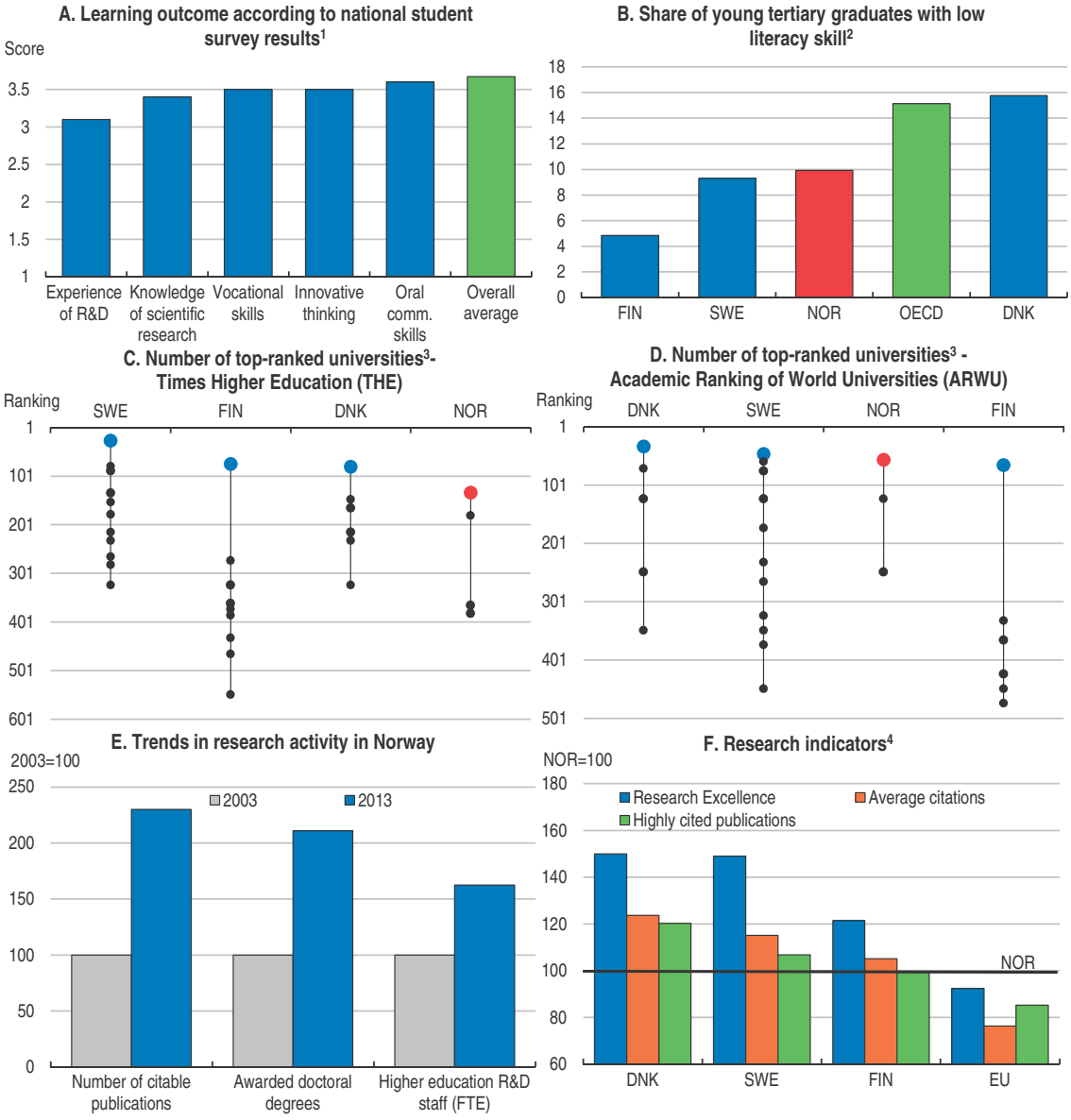
StatLink http://dx.doi.org/10.1787/888933314815

better in the PIAAC Survey than the OECD average (Figure 15, Panel B), it is still worrying. Norway also has fewer universities than its Nordic neighbours in a ranking of top universities on the basis of research-related and other indicators (Figure 15, Panels C and D). The European Commission's index of research excellence and some other research quality indicators also show scope for catch up with other Nordic countries (Figure 15, Panel F).

The tertiary education system is also relatively costly in terms of spending per student and as a share in GDP (Figure 16, Panels A and B). The predominantly public system charges students no tuition fees and provides loans to cover living expenses that can be partially converted to a grant. This support for students reflects Nordic social preferences for inclusiveness and equity, and financial independence of young adults. It is also a significant contributory factor to the high levels of participation in tertiary education.

While respecting social preferences, efficiency and quality need to be safeguarded. Substantial financial assistance to students, in particular, has not encouraged timely completions despite the conversion of loans to grants being conditional on progress in

Figure 15. **Tertiary education indicators**

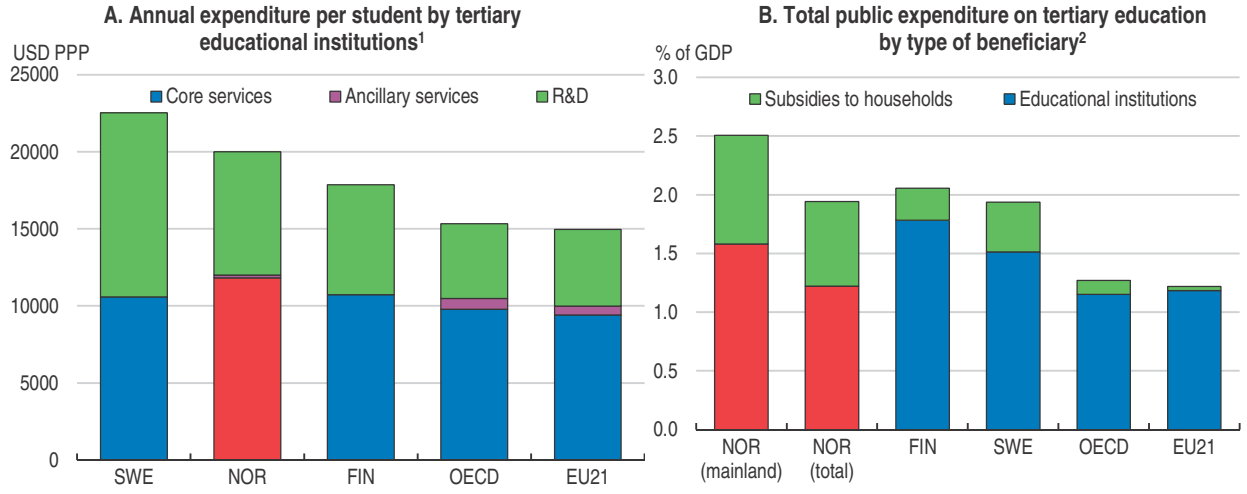


1. Average scores of respondents who rated education quality from 1 (worst) to 5 (best) for each question. The "overall average" refers to average of scores of all 10 questions in the student survey related to learning outcomes. 2014 data.
2. Share of tertiary graduates aged 20-34 who scored literacy level 2 or below (with level 5 being most proficient) in PIAAC 2012. More details about proficiency levels are available in "The Survey of Adult Skills Reader's Companion" (OECD 2014).
3. Number of universities in each country that are ranked in the world top 800 (THE) and 500 (ARWU). The ranking of each country is depicted on a line connecting the highest and lowest ranked ones among world top 800/500 universities. The overall score is calculated as a weighted average of 13 and 6 relevant indicators for THE and ARWU, respectively. 2015 data.
4. Research Excellence: a composite indicator for scientific and technology, which consists of four sub-indicators (highly cited publications, Top 250 universities, PCT patent applications and ERC grants received), for 2010. Average citations: average citations per document published during 1996-2014. Highly cited publications: 10% most-cited papers in each scientific field during 2003-12.

Source: Norwegian Agency for Quality Assurance in Education (2014), "2014 Studiebarometeret"; OECD, *PIAAC 2012 Database*; Author's calculations based on Times Higher Education (THE), "World University Rankings 2015-16" and Center for World-Class Universities at Shanghai Jiao Tong University, "The 2015 Academic Ranking of World Universities (ARWU)"; Nordic Institute for Studies in Innovation, Research and Education; SCImago (2015), *SCImago Journal & Country Rank Database*; OECD (2015), "Main Science and Technology Indicators", *OECD Science, Technology and R&D Statistics* (database); EC (2013), "An Analysis of National Research Systems (I): A Composite Indicator for Scientific and Technological Research Excellence", Figure E1; OECD (2015), *OECD Science, Technology and Industry Scoreboard 2015*.

StatLink http://dx.doi.org/10.1787/888933314822

Figure 16. **Norway's expenditure on tertiary education is well above the OECD average**



1. Expenditure is comprised of educational core services (directly related to instruction in educational institutions, including teachers' salaries, construction and maintenance of school buildings, teaching materials, books and administration of schools), ancillary services (transport, meals, housing provided by institutions) and R&D. There are differences across countries with regards to the R&D systems. In some countries most R&D is performed in tertiary education while in others a large proportion of R&D is performed in other public institutions or in industry. 2012 data.
2. Public subsidies to households cover living costs (scholarships and grants to students/households and students loans). 2012 data.

Source: OECD (2015), *Education at a Glance 2015*, Tables B1.2, B2.3 and B4.1.

StatLink http://dx.doi.org/10.1787/888933314833

studies. Although the situation seems to be improving, only around 65% of students are completing their degrees within 5 years (SSB, 2015b). Also, the partially performance-based funding system for higher-education providers has not delivered the expected efficiency and quality gains, and meanwhile it has overly incentivised institutions to focus on producing study credit points (required for the completion of courses) rather than degree completions. Moreover, despite improvements in recent years, enrolments in fields important for innovation, such as science and engineering, remain relatively low internationally. Also, supply shortages are expected in some areas, such as teaching and nursing, according to long term skills projections by Statistics Norway (SSB, 2013, 2014). Adding to challenges, many small institutions, though providing regional-level provision, do not reach a critical mass of staff and students for high quality tertiary education and research outcomes (Government of Norway, 2015).

To overcome the challenges faced by small institutions a major reorganisation of the higher education sector is in the pipeline. This aims to create stronger academic environments and increase efficiency through a process of institutional mergers. The first wave of mergers implemented in January 2016, reduced the total number of higher education institutions from 53 to 42. It is important to ensure that all the conditions for successful mergers are present, including careful selection of merging partners, adequate and sufficiently flexible financial support during the merging process, and an effective management and leadership. Close monitoring of the outcomes of the merging process is essential given mixed cross-country experiences (Skodvin 1999, 2014).

A government-commissioned expert group has recommended some new features and adjustments to the funding system for higher education, while maintaining its basic structure (Expert Group, 2015). Proposed changes include the alteration of the

performance-based component of funding to strengthen incentives in key areas, in particular study completion. Additional performance indicators, including one reflecting the number of graduates, were proposed to this end. Linking funding to graduation rates will, in principle, reinforce current incentives for completion in the system but the impact would need to be monitored and evaluated. The funding system could also be used towards other aspects of higher-education policy. Funding mechanisms could, for example, provide differentiated rewards to institutions for successful study outcomes for particular groups of students, such as immigrants, and specific courses such as certain subjects within the STEM disciplines, or nursing and teaching qualifications. Building in graduate labour market outcomes to providers' funding formulae could also be considered. In addition, as suggested by the expert group, a system linking a small portion of funding to a multi-annual performance agreement ("contracts") between the government and each higher education institution, could be considered. If properly designed, such agreements could provide an avenue for greater differentiation between institutions (Expert Group, 2015).

There is room for adjusting the student loan-grant system to encourage more timely completions. The government is currently considering the recommendations from the Productivity Commission and the expert group regarding an additional incentive for completion of all degrees. Given the evidence, further experimentation with incentives in student-loan support aiming to improve study completion certainly seems worthwhile. Student support could also be better linked to study requirements with a differentiation of the length of support according to the standard duration of courses. The achievement of other policy goals might also be helped by further tweaks to the loan-grant system, perhaps along the lines already in place that partially write off loans for students attending certain teacher training programs (STEM and foreign languages) and for graduate doctors who work in the northern counties. Discounts on loan repayment or grant conversions could be offered for students taking courses that are seen as having particularly high returns to the general public, such as certain subjects within the STEM disciplines and some professions where demand for graduates is likely to increase rapidly (long-term projections suggest this may be the case for nurses, for example); though selecting which subjects to support needs careful attention. Needless to say, the private return to education also depends strongly on wage prospects. In this context Norway's narrow wage distribution has some bearing on student choices.

Ensuring good communication and easily accessible data to help prospective students make informed choices is particularly important in Norway. Indeed, informing educational choices is one of the main policy challenges according to the *OECD Skills Strategy for Norway* (see Box 1 and OECD, 2014b). Improved professional career guidance services would particularly benefit students from disadvantaged backgrounds, who often tend to underestimate the net benefits of tertiary education (OECD, 2009). A committee was appointed in 2015 by the government to investigate how lifelong career guidance can be strengthened.

Successful tertiary outcomes hinge on effective monitoring mechanisms. The government should go ahead with plans to introduce tighter requirements for accreditation and the establishment of advanced research courses, especially given that non-university institutions can apply for university status under current arrangements. Since the early 2000s the number of universities has doubled (from 4 in 2003 to 8 in 2012)

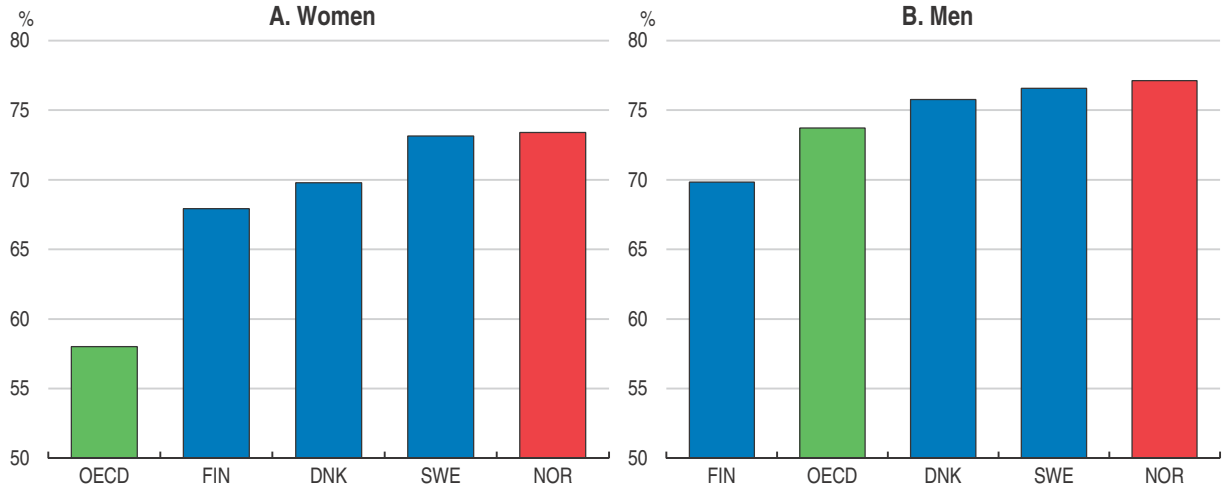
and still more institutions have aspirations for university status (NOKUT, 2013a). Courses in the new universities continue to be dominated by traditional professional programmes, such as teaching and nursing (NOKUT, 2013b). However, if this "academic drift" continues in the future it can have an impact on diversity and quality. It is important to safeguard educational opportunities with a more vocational orientation to meet skills demand. More rapid development of information systems for monitoring learning outcomes and the quality of higher education, notably the development of a portal with readily available quality indicators, is vital.

High female employment is a key driver of many of Norway's outstanding socio-economic outcomes

Much of Norway's and other Nordic countries' favourable scores on well-being are attributable to a strong focus in policy, and by society, on employment, and most significantly on the employment of women (Figure 17). High female labour-market participation means comparatively fewer poverty issues, such as those arising from single-parent households, and promotes efficient use of skills and talent. The good availability of subsidised child-care services and working-time flexibility helps combine paid employment and family life. Also, Norway has led steps to actively promote women's career progression. In particular, it was among the first countries to introduce women-on-boards rules for publicly listed companies (Box 2). This said, changes to parental leave by the current government include a reduction in the leave that is reserved for the mother and father individually (with corresponding increase in the "shared period"), may well result in less use of parental leave by men as less leave is reserved exclusively for them, thereby diminishing women's labour-market opportunities.

Figure 17. **Norway's employment rates[1] are high**

Among those aged 15-64



1. Ratio of employment to population (15-64). 2014 data.

Source: OECD (2015), *Labour Force Statistics* (database).

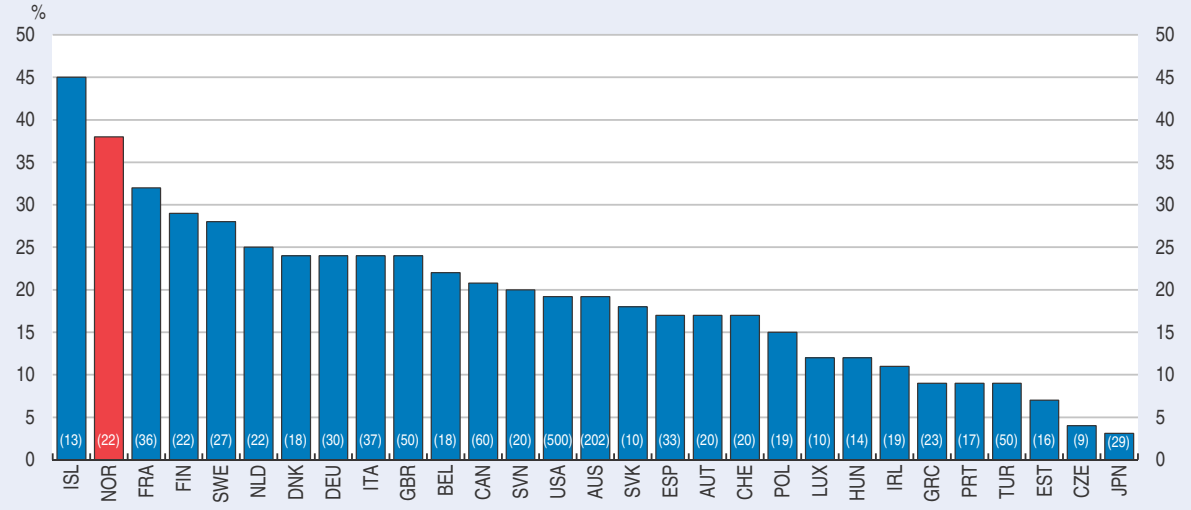
StatLink http://dx.doi.org/10.1787/888933314841

Box 2. **Corporate board gender quotas in Norway**

Gender quotas were first introduced in some public sector entities in the 1980s and were extended in 2003 under legislation requiring at least 40% of women on boards of public limited companies (known as ASA), inter-municipal and state-owned companies. However, as of 2005, only 17% of board members were female and enforcement of the quotas was tightened by legislating sanctions, including the threat of dissolution of non-compliant companies (Storvik-Teigen, 2010). Subsequently, the 40% target was reached in 2008. The coverage of the quota was extended to co-operative companies in 2008 and to municipal companies in 2009.

Quotas were often resisted by business on grounds that it would be hard to find qualified women and therefore quality of decisions would deteriorate (Storvik-Teigen, 2010). To ease these concerns the government introduced policies to identify qualified women in a database and training programmes for qualified female candidates. Many also considered quotas an unnecessary interference. As a result about a third of the 563 concerned companies delisted upon the introduction of the sanctions. These fears have been proven wrong. On average, female board members in Norway have higher educational qualifications than their male colleagues (Bertrand et al., 2014). Some Norwegian studies (Storvik-Teigen, 2010) have also shown that female presence at boards has led to less layoffs in downturns, but with some trade-offs with profitability. The quotas are now widely supported and considered a success in enhancing diversity and better business decisions. However, the impact on enhancing women's careers more generally has been limited (Bertrand et al., 2014), although more positive effects may emerge in the coming years. Overall, the Norwegian experience suggests it can take a long time to reach quota and that sanctions are critical.

Figure 18. **Share of women board members in the largest publicly listed companies**[1]



Note: () indicates the number of companies on which the data are based for each country.

1. 2014 data. For EU countries, Iceland, Norway, and Turkey the companies are a selection of those included in the Primary Blue-Chip Index, which is an index that includes large companies headquartered in each country based on market capitalisation and/or market trades. For Australia, Canada, Japan, Switzerland, and the United States the companies are selected from various stock-market listings (S&P/ASX 200, S&P/TSX 60, TOPIX Core 30, SMI index, and S&P 500, respectively).

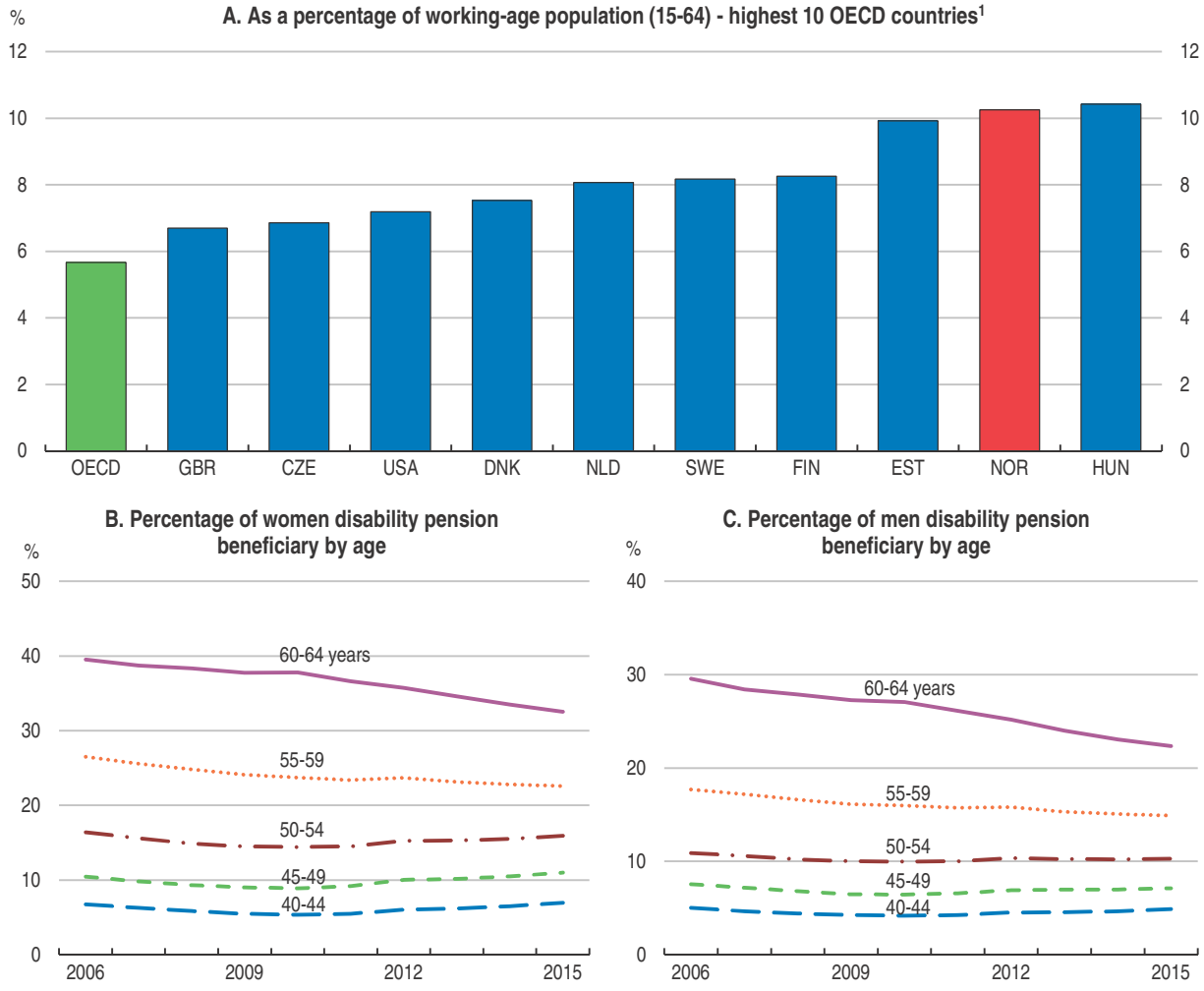
Source: European Commission (2014), *Database on women and men in decision-making*; Catalyst (2014), *Catalyst Census: Women Board Directors 2014*.

StatLink http://dx.doi.org/10.1787/888933314852

Sickness leave and disability benefit remain a route to early retirement for many

Norway's sickness leave and disability benefit system has long been a key weak-spot of the welfare system, encouraging substantial *de facto* early retirement. It is particularly relevant given pressures arising from ageing. Typically, individuals transition from paid sick leave (which lasts up to one year), to a rehabilitation-type benefit (up to four years duration) and then to the disability pension. Around 10% of working-age individuals are receiving the disability benefit (Figure 19), most of them approaching retirement age. Among 60-64 year-olds, one third of women and nearly one quarter of men are on disability benefit. In addition, around 5% of the working age population are on the rehabilitation benefit and about 3.5% are receiving the sick-pay allowance. In recent years there has been a downward trend in disability-benefit recipiency among older cohorts. However there has been a corresponding increase in the number of beneficiaries of the rehabilitation benefit (Figure 19). Also the share of recipients is rising in some younger cohorts.

Figure 19. **A sizeable minority of the population are on disability benefit**



1. Data for 2010 or last available year.

Source: OECD (2014), *Economic Policy Reforms 2014: Going for Growth Interim Report*; Norwegian Labour and Welfare Administration (2015); Statistics Norway (2015).

StatLink http://dx.doi.org/10.1787/888933314866

Many positive features have already been built into the system. For instance, there are avenues for gradual re-entry from sickness into work, a fine grid of partial disability benefits and comprehensive rehabilitation, training and work placement services. Also, there is an agreement between the government and unions (the Inclusive Working Life Agreement) to reduce sick leave. However, although it has been renewed many times, it does not appear to have made a huge impact.

All positive efforts to tackling the problems in the sickness and disability system can only be applauded. Past *Surveys* have, in particular, suggested:

- Lengthening the employer-financed phase of sick leave (currently 16 days) to encourage a more active role by private- and public-sector employers in monitoring, preventative measures and rehabilitation.
- Reducing the generosity of payment, for instance by lowering the replacement rate for long-term sickness.
- Tightening medical assessment procedures, especially through more "third party" medical assessment. Despite past measures and plans by the current administration (it aims to trial a new medical assessment after six months sick leave and implement guidance for doctors regarding sickness certificates), the assessment system may still rely too heavily on assessment by the individual's general practitioner.

Public-sector pension regulation and temporary work regulation limit labour supply

Norway's pension system includes early (or deferred) retirement provisions under the so-called Contractual Early Retirement (AFP) system. Biases in favour of early retirement were removed from the private-sector variant of this scheme in 2011. However, the public-sector AFP system continues to mean a reduced incentive for employment beyond 62 years of age, encouraging early retirement. A process that includes the social partners is underway with a report outlining alternative public-sector pension models due by the end of 2015. This initiative could clearly communicate the downsides of maintaining the *status quo* in public-sector pensions and propose effective and workable avenues for reform.

Norway has to date scored poorly on indicators of the restrictiveness of temporary work-agency employment and on the use of fixed-term contracts (OECD, 2013b). Regulation includes limits on the cumulative number of temporary work assignments. Such provisions aim to prevent the undermining of protection for permanent employees, and, to a degree are part of the consensus-based "package" of pay and conditions in Norway. However, past OECD Surveys (OECD, 2014a, for instance), have underscored that there is nevertheless room for liberalisation. The government has taken some steps including the introduction of a "general permit" for temporary employment open to all employers and occupations. In addition, there has been some lightening of working-time regulation (see annex).

Tackling environmental issues

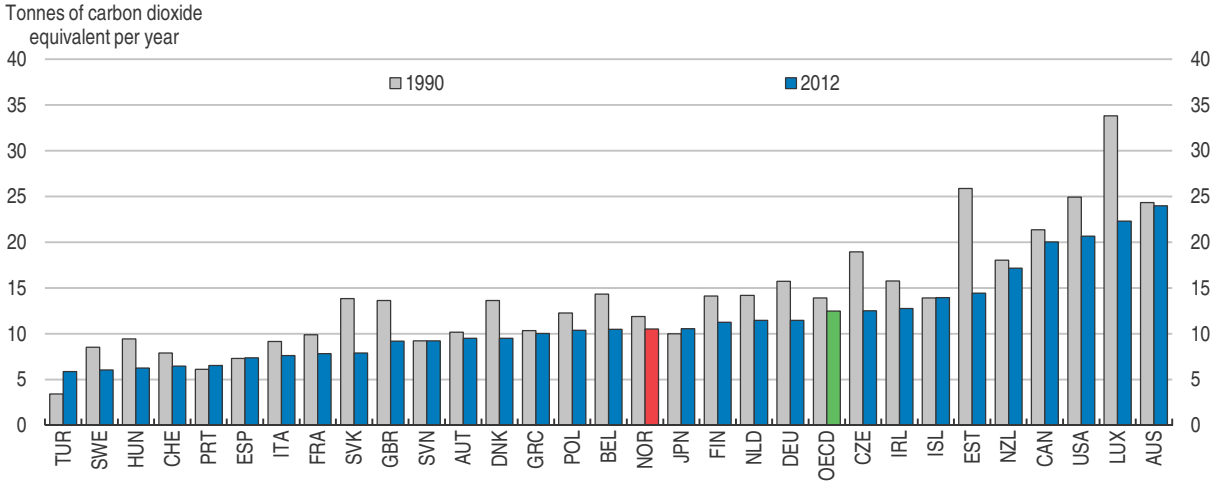
Norway has good environmental-policy frameworks and strong commitment

Norway is at the forefront of good practice in many areas of environmental policy. Its National Sustainable Development Strategy provides a comprehensive framework for incorporating environmental issues into policymaking (OECD, 2011). Also, management and co-ordination by the Ministry of Finance and development of sustainability indicators help maintain the profile of environmental sustainability in decision making. Furthermore,

as a member of the European Economic Area, Norway has transposed most EU environmental directives and often imposes more stringent requirements than those require. Also, use of economic policy instruments has been pioneering in many areas, for instance regarding taxes on waste landfilling and incineration, and on sulphur monoxide and nitrogen monoxide. Innovative technical solutions have also been encouraged, for instance in carbon-capture technology.

Norway's greenhouse-gas emissions (GHG) per capita are middle-ranking in international comparison (Figure 20). Emissions from production of oil and gas, along with chemical processes in the production of aluminium and alloys account for a substantial proportion of emissions. Meanwhile, the abundance of hydroelectric power means electricity is generated with practically zero emissions. Transport accounts for about one quarter of emissions. Net greenhouse-gas absorption by forests and other area corresponds to about half of gross emissions (such net absorptions is not taken into account in the international comparisons in Figure 20).

Figure 20. **Norway's per capita greenhouse gas emissions are middle ranking**



Source: OECD (2014), Environment Statistics. Based on National Inventory Submissions 2014 to the United Nations Framework Convention on Climate Change (UNFCCC, CRF tables), and replies to the OECD State of the Environment Questionnaire.

StatLink http://dx.doi.org/10.1787/888933314873

Norway has been a member of the European Union's Emission Trading System since 2008 and it will probably reach its current 2020 target under the Kyoto Protocol, which is consistent with reducing GHG by 30% compared with 1990. It is likely to achieve emission targets, in part, through the purchase of quotas issued under the Clean Development Mechanism (CDM). By and large, such purchases probably reflect an absence of lower-cost opportunities for domestic initiatives. Also, Norway has creditably been an early mover in goal renewal by setting an "Intended Nationally Determined Contribution (INDC)" of a 40% reduction on the 1990 emission level by 2030. Norway intends to fulfil this emissions target in co-operation with the EU, and a dialogue with EU on this issue has started.

Norway has long experience with environmental taxation, indeed the first Norwegian tax with an explicit environmental purpose (a sulphur tax levied on mineral oil) was introduced in 1971. Taxes on mineral fertilisers, pesticides and lubricant oil were introduced in 1988, carbon dioxide (CO_2) tax on petrol, auto diesel oil, mineral oil and the petroleum

sector (only offshore) in 1991. Since then changes in taxes relating to greenhouse gas emissions have been made mainly by broadening the tax bases. Today, more than 80% of Norwegian greenhouse gas emissions are covered by carbon taxes and/or the EU emission trading system. Nevertheless, as elsewhere, greenhouse-gas taxation remains far from uniform and efforts to reduce disparities would help ensure consistent and economic incentives to abate. A commission on green taxation is due to report in December 2015 that is expected to address carbon-price uniformity along with other issues.

Bibliography

Arnold, J. (2008), "Do Tax Structures Affect Aggregate Economic Growth? Empirical Evidence from a Panel of OECD Countries", *OECD Economics Department Working Papers*, No. 643, OECD Publishing, Paris.

Bertrand, M., S. Black, S. Jensen and A. Lleras-Muney (2014), "Breaking the Glass Ceiling? The Effect of Board Quotas on Female Labor Market Outcomes in Norway", *NBER Working Paper*, No. 20256, June.

Expert Group (2015), "Funding for Quality, Diversity and Collaboration – New Financing System for Universities and University Colleges", *Suggestions from Experts Appointed by the Ministry of Education on April 8, 2014*, Report Submission January 2015.

Finanstilsyet (2015), *Risk Outlook 2015: The Financial Market in Norway*, Finanstilsyet (The Financial Supervisory Authority of Norway).

Government of Norway (2013), *Political Platform for a government formed by the Conservative Party and the Progress Party*, October.

Government of Norway (2015), "Concentration for Quality – Structural Reform in the Higher Education Sector", *White Paper*, No. 18 (2014-15), Government of Norway.

IMF (2014), *IMF Article IV Selected Issues Paper*, Norway, August.

Johansson, A., C. Heady, J. Arnold, B. Brys and L. Vartia (2008), "Taxation and Economic Growth", *OECD Economics Department Working Papers*, No. 620.

Ministry of Finance (2015a), *The National Budget 2016, A Summary*, Oslo.

Ministry of Finance (2015b), "Countercyclical Buffer Increases Next Year", *Ministry of Finance Press Release*, No. 28/2015, Oslo.

Ministry of Finance (2015c), "Regulation on Requirements for Residential Mortgage Loans", *Ministry of Finance Press Release*, No. 26/2015, Oslo.

Ministry of Finance (2015d), "Recommends a More Gradual Phasing In of Oil Revenues", *Norwegian Public Report*, NOU 2015:9, Press Release from the Thøgersen Commission, Government of Norway.

NOKUT (Norwegian Agency for Quality Assurance in Education) (2013a), "Review of NOKUT – The Norwegian Agency for Quality Assurance in Education Report of the ENQA Panel", May.

NOKUT (2013b), "Institutional Dynamics in Norwegian Tertiary Education", June.

Norges Bank (2015a), *Monetary Policy Report With Financial Stability Assessment*, No. 2/15, June.

Norges Bank (2015b), *Economic Perspectives*, Address by Governor Øystein Olsen to the Supervisory Council of Norges Bank and Invited Guests on 12 February.

OECD (2008), *OECD Economic Surveys: Norway 2008*, OECD Publishing, Paris.

OECD (2009), *OECD Reviews of Tertiary Education: Norway*, OECD Publishing, Paris.

OECD (2010), *OECD Economic Surveys: Norway 2010*, OECD Publishing, Paris.

OECD (2011), *OECD Environmental Performance Reviews: Norway 2011*, OECD Publishing, Paris.

OECD (2012), *OECD Economic Surveys: Norway 2012*, OECD Publishing, Paris.

OECD (2013a), *Value for Money in Government: Norway 2013*, OECD Publishing, Paris.

OECD (2013b), *OECD Employment Outlook 2013*, OECD Publishing, Paris.

OECD (2014a), *OECD Economic Surveys: Norway 2014*, OECD Publishing, Paris.

OECD (2014b), *OECD Skills Strategy Diagnostic Report: Norway*, OECD Publishing, Paris.

OECD (2015), *OECD Skills Strategy Action Report: Norway*, OECD Publishing, Paris.

Productivity Commission (2015), "Productivity – Underpinning Growth and Welfare", *Official Norwegian Reports*, NOU 2015:1.

Skodvin, O.J. (1999), "Mergers in Higher Education – Success or Failure?", *Tertiary Education and Management*, Vol. 5, Issue 1, pp. 65-80.

Skodvin, O.J. (2014), "Merger as an Instrument to Achieve Quality in Higher Education – Rhetoric or Reality?", Paper Presented in Track 1 at the EAIR 36th Annual Forum in Essen, Germany, August.

SSB (Statistics Norway) (2013), "Forecasting Demand and Supply of Labour by Education", *Reports 42/2013*.

SSB (2014), "Projections of Population and Labour Force by Education Based on Alternative Assumptions About Immigration", *Reports 2014/31* (in Norwegian).

SSB (2015a), *Economic Survey*, Vol. 2, June.

SSB (2015b), "Throughput of Students in Tertiary Education, 2013/14", June.

Storvik, A. and M. Teigen (2010), "Women on Board: The Norwegian Experience", Fredrich Ebert Stiftung, International Policy Analysis.

ANNEX

Progress in structural reform

The objective of this annex is to review action taken since the previous Survey *(March 2014) on the main recommendations from previous* Surveys, *which are not reviewed and assessed in the current* Survey.

Recommendations	Action taken since the previous Survey (March 2014)
A. Ensuring price and financial stability	
Reduce vulnerabilities to the banking sector with particular attention to the housing market	
Monitor the impact of macro-prudential tightening on mortgage lending and if necessary, take further steps and also consider revising the monitoring system itself. Specifically consider: • Further tightening guideline loan-to-value ratios, possibly set them in a counter-cyclical way. • Reducing access to interest-only loans. • Work with foreign regulators to close down any remaining loopholes ("regulatory arbitrage") that give foreign-owned branches and subsidiaries advantages in mortgage lending.	New macro-prudential regulations on mortgage lenders were introduced in June 2015 as part of a wider housing-market strategy. These include: • A loan-to-value ratio cap of 85% on all new mortgages (and 70% for home credit equity lines). • Requirements that mortgage assessment includes whether the borrower can afford repayments were the rate of borrowing to increase by 5 percentage points. • A "speed limit". Up to 10% of the volume of a lender's approved loans per quarter to be loans do not have to meet the regulatory requirements for debt-servicing capacity, loan-to-value ratio or repayments.
Facilitate more responsive housing supply. In particular, reduce incentives of local authorities to withhold land for development, other than those related to clear externalities that cannot be compensated with revenue raised from sales. See also, recommendations on the tax treatment of assets.	• The housing-market strategy aims to addresses supply constraints, for instance through simplification of housing-construction regulation.
Other relevant action taken • Banking sector. New capital and buffer requirements for credit institutions and investment firms (based on Basel III standards and the CRR/CRD IV framework) continue to be phased in (this three-year process is due to be completed in July 2016). The requirements are being implemented ahead of the EU schedule, and Norwegian authorities have utilised flexibilities provided for in the EU framework to impose somewhat stricter requirements than the EU minima. • Insurance sector. The Solvency II framework will enter into force on 1 January 2016 in Norway, in parallel with the EU. This will imply significantly higher solvency requirements for Norwegian insurers. • A counter-cyclical capital buffer became fully operational as of July 2015, which is to be increased in size as of mid-2016.	
B. Maintaining fiscal prudence and ensuring efficient tax and public spending	
Review the "4% rule" that guides fiscal deficits and the pace of drawdown from the wealth fund	
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, uncertainties in the future rate of return on the GPFG, pressure of demand in the economy, and fiscal challenges due to ageing.	A commission charged with reviewing the wealth-fund drawdown rule reported in June 2015. It recommends a more gradual phasing in of oil revenues, and proposed two auxiliary rules that would put a speed limit on structural deficit expansion in order to have a gradual return in the drawdown rate to the 4% guideline. Depending on the detail, these rules could indeed ensure that the deficit remains well below that implied by the 4% guideline for a prolonged period.
Gradually lower the overall tax burden and reduce tax distortions	
Align the treatment of asset classes in wealth tax and capital-gains tax, especially as regards housing assets.	Valuation for tax purposes of second homes and business property was increased from 50% to 60% from 2014, from 60% to 70% from 2015 and from 70% to 80% of estimated market values in the 2016 budget proposal (the rate for first homes was left at 25%).
In personal income tax, either incorporate imputed rental income or abolish mortgage interest deductibility.	No action taken.
Consider further reductions in the wealth tax, *inter alia*, to increase incentives for entrepreneurs (2014).	The rate of wealth tax has been decreased from 1.1% in 2013 to 0.85% in 2015 and the threshold is increased to NOK 1.4 million in the 2016 budget proposal. The inheritance tax was abolished in 2014.
Other relevant action taken The government has, in the 2016 budget, proposed to increase the 8%-VAT rate to 10%. Rate of tax on "ordinary" income has been lowered in parallel with cuts to the rate of corporate taxation. As of 2016 the rates will be 25%.	
Increase public-spending efficiency	
Consider a multi-annual approach to expenditure planning in the central-government budgeting process.	A commission whose remit includes consideration of multi-year budgeting has recently submitted its report. "Efficiency dividends" (i.e. resourcing cuts in certain budget chapters with a view to prompting productivity gains) were introduced in the 2015 Budget and were strengthened in the 2016 Budget.
As regards resource-allocation decisions and follow-through, make more consistent assessment of value for money in public spending. In particular: • Use regulatory impact analysis and cost-benefit analysis more systematically. • Ensure proposals for a new public body for transport investment focus primarily on cost-efficiency in project choice, construction and maintenance.	An Information and Communication Technology (ICT) Council is being established. A limited liability company was established in May 2015 that will plan, construct and operate specific parts of the national road network. The government has detailed a new framework for public-private partnerships in infrastructure development that sensibly stresses evaluation based on efficiency.
Note, a number of recommendations listed elsewhere are also relevant, notably as regards pension reform.	
Other relevant actions taken The number of ministries has been reduced from 18 to 15 and several agencies have been merged. An initiative to encourage mergers of municipalities is underway (see Chapter 2).	

Recommendations	Action taken since the previous Survey (March 2014)
C. Improving business conditions	
Improve framework conditions for business activity	
Address innovation and technology issues (largely 2014 *Survey*), notably through: ● Continued use of a competitive-bid approach for research grants rather than automatic support. Continued focus in policy for clusters on improving framework conditions and information flows, rather than promoting clusters *per se*. ● Promotion of entrepreneurial skills such as risk assessment, people management, project planning and finance, alongside the promotion of STEM (Science, Technology, Engineering and Mathematics) skills. ● Encouragement of universities to further develop Technology Transfer Offices (TTOs), including collaboration between universities. ● Strengthening the objectivity of evaluations of business-support programmes (notably innovation and R&D schemes).	The 2015 Budget proposed increasing support via the core programme, *Skattefunn*. The government has launched an evaluation of policy promoting university-business linkages, including assessment of whether technology transfer offices require more powers.
Improve transport services.	Road. Actions include: ● Establishment of a new limited liability company that will be in charge of the planning, construction, operation and maintenance of part of the national road network. It will become fully operational in 2016. The company will be financed through government allocations and road tolls. ● Plans for consolidation of road-toll companies is planned (from 60 companies at present to no more than 5). ● Regulation allowing use of "modular" truck-trailer systems has been made permanent. ● More extensive use of public-private partnerships. Rail. The government has detailed proposals for a restructuring of rail infrastructure, including greater separation of track ownership and maintenance and train services. Ports. For the first time, a national port strategy has been detailed.
Ensure strong market competition, reduce state aid and subsidies	
Adjust competition legislation and enforcement: ● Review the "total welfare" criterion of competition policy. ● Increase regulatory power of competition authorities.	A proposal for a new independent appeals body for competition cases is currently in public consultation. Currently, appeals are addressed within the Ministry of Trade, Industry and Fishing. The "total welfare" criterion is being reviewed.
Prune state stakes in business: ● Reduce the scope and size of stakes. ● Improve state-owned activities governance.	The government has sold all shares in the aquaculture company, *Cermaq ASA*. It also has parliamentary approval for sales in several other enterprises, including reduction in the state's holding in the telecoms company, *Telenor*, holding to 34%.
Promote competition in network industries (especially postal and rail services).	Postal services. Proposals are before Parliament for that will abolish Norges Posten's monopoly on letters below 50 grams and reduce the universal service. The new act is expected to enter into force in 2016. Rail services. Structural reforms that would strengthen the division between the "network" and "service provision" are planned with a view to widening the scope of market competition are planned.
Reduce barriers to entry in the retail sector.	Positive steps include: Proposals in 2015 for significant liberalisation of shop opening hours, including allowing all shops to open on Sundays (except for a number of holidays). Preparation of legislation aimed at improving competition in the grocery market (2015).
Reduce support for agriculture and fishing sectors: ● Reduce tariffs and increase import quotas in the agriculture market. ● Reduce restrictions on transfers of fishing quotas.	Agriculture: ● Measures have been taken to encourage larger scale production, including higher ceilings on production quotas (see Chapter 2 of this *Survey*). ● Also, the removal of protective clauses in legislation so as to free-up price setting and permit corporate ownership is in the pipeline. ● Various government-sponsored commissions are underway with a view to further reform. ● A white paper on globalisation and trade (May 2015) has proposed to phase out export subsidies for agricultural products within 2019.

Recommendations	Action taken since the previous Survey (March 2014)
D. Human capital, jobs and welfare	
Improve education	
In primary and secondary education reform, consider: ● Reduction in the number of schools. ● Publication of school performance on standardised national tests of pupils. ● Stricter selection and graduation criteria for initial teacher training and encouragement of more training among practising teachers. ● Develop more structured career paths with recognition for demonstrated competencies. ● Widen the use of school performance as a determinant of school principals' rewards (as currently is the case in Oslo schools); consider school level merit-based salary awards to teachers.	Partial progress: Some of these issues are being addressed in a new programme (*Promotion of the status and quality of teachers – joint effort for a modern school of knowledge*), whose goals include a substantial increase in support for teachers to continue education and the introduction of 5-year master's-level degree for new entrants to the profession. The *Teacher Enhancement Programme* in the 2016 budget promotes academic and pedagogical teaching qualifications.
In tertiary education, focus more on cost-effectiveness, with better incentives for both students and institutions. Specifically consider: ● Increasing transparency in the allocation of public funds to higher education. ● Greater guidance to students on course selection, better information on career prospects, differentiated tuition fees or differentiating (existing) grants, and penalties for excessive duration of studies.	The government commissioned in 2014 an expert group to review the funding system for higher education institutions, which delivered its report in January 2015 (see Chapter 1 of this *Survey*). Reforms are underway to improve the quality of higher education, among other measures through mergers (see Chapter 1 of this *Survey*). A commission has been set up to develop an overarching system for life long career guidance with a view to improving access to services and the quality of services. It is due to report in April 2016.
Ensure benefit systems do not dissuade labour-market participation	
Minimise work disincentives in the unemployment insurance system.	The maximum period for the temporary-layoff benefit has been increased. However, for unemployment benefit a holiday supplement has been abolished and stricter rules for receiving benefit have been introduced in some instances.
Reduce sick leave and tighten disability schemes, *inter alia* consider: ● Lowering the replacement rate for long-term sickness absence. ● Clearer guidelines on disability assessment to general practitioners and monitor compliance.	Recent measures include: ● Introduction of a new Disability Pension system in January 2015 that is separated from the old-age pension system and follows calculation principles similar to those used for the Work Assessment Allowance. ● A new method for calculating the disability pension when a person has income from earnings ("tapering formula") has been introduced that avoids situations where total income can decrease with increased earnings.
Remove biases favouring early retirement the old-age pension system.	A reform process aimed at changing the public-sector variant of the Contractual Early Retirement (AFP) system is underway. As part of this a report outlining alternative pension models is due at the end of 2015.
Increase labour-market flexibility	
Increase flexibility in wage setting.	No recent action.
Lighten employment regulation.	A new "general permit" for temporary employment open to all employers and occupations was introduced in July 2015. Working-hours regulation has been lightened on some fronts, for instance: ● The limit for normal working hours in an individual agreement on average normal working hours, has been increased from 9 to 10 hours per day. ● The limit for overtime that can be agreed between the employees' and employers elected has been increased up to 20 hours per week.
Enhance efficiency of job placement services and active labour market policies (ALMP).	A review of the NAV is underway (the NAV, established in 2006, provides one-stop-shop service for benefits and job placement via a network of offices).
Improve health care	
Past *Surveys* have focussed on aspects of financing and have suggested: ● Re-structuring activity-based (including Diagnosis Related Groups, DRG) financing to avoid excessive incentives for low-priority activities. ● Greater use of co-payments by patients.	"Neutralisation" of VAT treatment between public and private provision (see above) will also apply to health trusts. A system of free treatment choice for specialist health services is being implemented that paves the way for greater private provision.
E. Tackling environmental challenges	
Limit carbon-dioxide (CO_2) emissions, and reduce the divergence of rates in the CO_2 tax.	In 2015 the CO_2 taxation on natural gas, liquid petroleum gas and on domestic aviation as well as the tax on hydrofluorocarbons (HFCs) and perfluoinated chemicals (PFCs) was increased. In addition the mandatory requirement of the share of biofuels of total gasoline and auto diesel sold on the market was increased.
Account systematically for environmental aspects in cost-benefit calculations (e.g. by using an explicit shadow price for GHG emissions.	
Other notable actions taken Air pollution. Tighter regulation on particulate matter that is more stringent than current EU regulation is due to be introduced in 2016. The government budget for 2016 proposes a road usage tax on natural gas and liquid petroleum gas (LPG). Water management. River basin management plans for 2016-21 will include environment mitigation mechanisms, notably regarding hydropower. Biodiversity. Implementation of EU Regulation 995/2010 began in May 2015, coastal heathlands have been given a special legal status.	

Thematic chapters

Chapter 1

Addressing the challenges in higher education

Norway's predominately public and tuition-fee free tertiary education system encourages participation and has high attainment rates. However, challenges in spending efficiency, study times, skills demand, inclusiveness and quality remain. Also, learning outcomes could improve further. Moreover, few Norwegian universities rank high in international comparisons on the basis of research-related and other indicators, and spending per student or GDP is relatively high. Many small institutions, aiming to meet regional needs, do not reach critical mass in staff and student numbers. Many students take considerable time to finish their studies despite financial incentives, and students from lower income groups have low tertiary participation and completion rates despite a strong focus on inclusiveness. Enrolments remain low in fields such as science and engineering, although they have increased in recent years, and supply shortages in some professional areas indicate room for improvement. Better incentives for both students and institutions to ensure timely completions, with a special emphasis on disadvantaged students and labour market needs, a structure that paves the way for adequately sized institutions, and effective governance are essential for higher quality education and research. Effective monitoring of the outcomes is also vital. The government's comprehensive quality-enhancing agenda, with a focus on these fronts, is welcome.

Competitiveness in a high-income, high-cost country such as Norway requires a highly skilled and adaptable labour force. Access to higher education is also an important avenue for greater inclusiveness and wellbeing. High quality tertiary education is of major importance for both economic and social goals. Best practice for tertiary education is difficult to define, as the socio-economic and educational structure and traditions differ across countries. However, the key challenges for a well-functioning tertiary system are broadly the same. The OECD report on *Tertiary Education for the Knowledge Society* highlights the need for responsive institutional governance, an efficient use of public funds, an effective quality assurance system, and for polices that promote quality and research excellence (Santiago et al., 2008). Equity in tertiary education through equality of opportunities and improvements in participation of the least represented groups add to these policy objectives.

Norway's tertiary education system is well-run overall, with a strong commitment to inclusiveness and equity and an emphasis on quality. Students face low barriers to participation and attainment rates are well above the OECD average. Moreover, research activity has risen rapidly. The system also matches relatively well the demand and supply of tertiary graduates. At the same time, weaknesses in learning outcomes (reported in some surveys), relatively low completion rates and long duration of studies, a fairly dispersed structure, fewer internationally top-ranking universities than in Nordic peers, and the relatively high costs of the system in terms of spending per student or share of GDP, point to potential efficiency and quality issues.

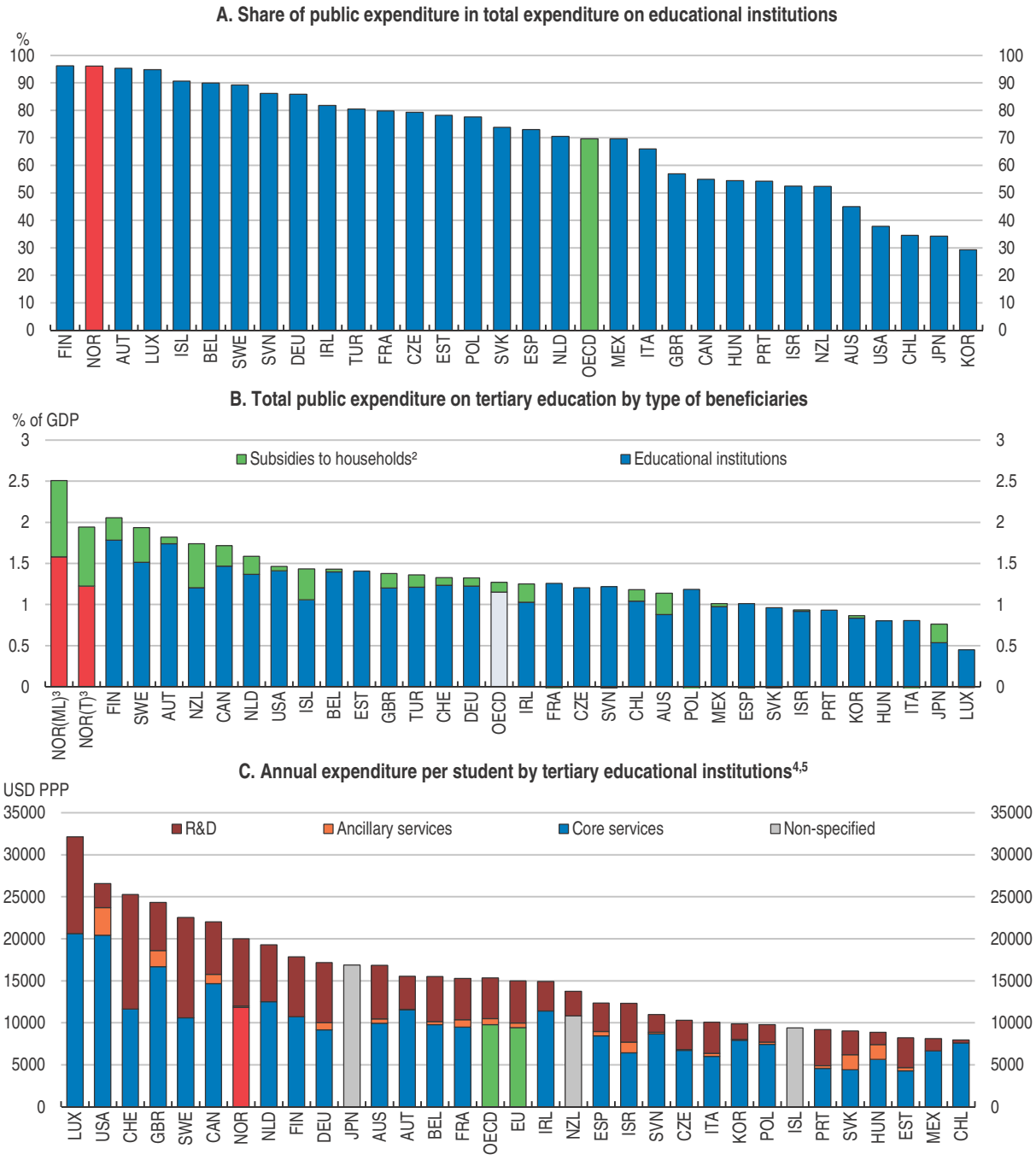
The chapter discusses these challenges, and lays out options for improvement. It is important to connect closely investment in higher education with outcomes, ensuring high quality. An important challenge in structural reform is to resolve tensions between quality (and efficiency) objectives and the maintenance of a substantial network of regional tertiary-education providers, many of which are small scale. The analysis focuses on issues pertaining to higher education only, given the difference in nature and the small size of the still developing vocational sector.

The Norwegian tertiary education system: Key features and challenges

A primarily public system with comparatively high spending

The Norwegian tertiary education system is predominately public; 96% of spending on educational institutions comes from public sources compared to 70%, on average, across OECD countries (Figure 1.1, Panel A) (Box 1.1). This reflects a strong view that education should be accessible for all, in line with the "welfare society" model characterising the Nordic countries (Ahola et al., 2014). There are no tuition fees at public institutions (these cater for over 85% of all students) in Norway and a financial support system for living expenses is available, where all students are eligible for assistance. Public provision also reflects the emphasis on regional considerations.

Figure 1.1. **Expenditure on tertiary education**[1]



1. 2012 data except for Canada (2011) and Chile (2013). Italy excludes short-cycle tertiary programmes.
2. Public subsidies to households for living costs (scholarships and grants to students/households and students loans).
3. Mainland GDP is taken for the calculation of NOR (ML) and total GDP for NOR (T).
4. Expenditure is comprised of education core services (directly related to instruction in educational institutions, including teachers' salaries, construction and maintenance of school buildings, teaching materials, books and administration of schools), ancillary services (transport, meals, housing provided by institutions) and R&D. There are differences across countries with regards to the R&D systems. In some countries most R&D is performed in tertiary education while in others a large proportion of R&D is performed in other public institutions or in industry.
5. Canada and Luxembourg include public institutions only.

Source: OECD (2015), *Education at a Glance 2015*, Tables B1.2, B2.3, B3.1 and B4.1.

StatLink http://dx.doi.org/10.1787/888933314888

Box 1.1. **Higher education in Norway: Main features**

The higher education sector in Norway is governed by the Act for Universities and University-Colleges, which since 2005, covers both public and private institutions (Reichert and Ekholm, 2009). The Ministry of Education and Research has the overall responsibility for the sector, including funding (NOKUT, 2013a). Public (state) institutions do not charge fees for students, apart from those students who are not on a programme that leads to a degree or a vocational diploma, as for example is the case of continuing education courses. Private institutions can demand fees from students for all types of education, even when they receive state funding; but the fees must be used to the benefit of the students. Students in public and private institutions may apply for loans to cover the costs of living, and also that of fees in the latter case.

The higher education sector principally consists of the following types of institutions: the universities (all of which are state-owned), specialised universities (public or private) and the university-colleges (public or private). The university-colleges were first formed in 1994 with the merger of 98 regional colleges into 26 new institutions. Since the early 2000s the number of universities has doubled from 4 to 8 (NOKUT, 2013b). Three of the four new institutions are the result of university-colleges have been upgraded to university status and are often referred to as the "new universities".

In terms of programmes provided, universities offer extended education in areas such as medicine and law and other programmes at an undergraduate level or above, while the university-colleges provide mainly courses with professional orientation such as teacher training, nursing, engineering, and social work. Overall, universities are more research-oriented than the university-colleges, the latter traditionally concentrating more on teaching (Hovdhaugen, 2013). However, as described in the main text this distinction is narrowing; several university-colleges offer master's programmes and some also have the right to award doctoral degrees.

Admission to higher education is based on successful completion of upper secondary education with some specified courses (leading to the Higher Education Entrance Qualification); some study fields have additional entrance requirements (NOKUT, 2013a). Admission is based, in particular, on a mix of course grades and grades from exams which are uniform across the country. Students who have completed upper secondary vocational training and two years tertiary vocational education can also be admitted to higher education, conditional on meeting certain Norwegian-language requirements. In addition, applicants who are 25 years old or more and do not fill the usual formal requirements can be accepted for certain study programmes on an individual assessment based on formal and informal skills.

Completed higher education courses are measured in credits ("studiepoeng") that comply with European Credit Transfer System Standard (ECTS). The full-time workload for one academic year is 60 credits (NOKUT, 2013a).

A comprehensive reform in higher education 2002, known as the "Quality Reform", introduced a new degree structure (3-year bachelor's degree, 2-year master's degree and 3-year doctoral degree), a grading system and a quality assurance system in line with the Bologna process (NMER, 2007). The new degree structure was implemented for most of the programmes (EC, 2015). The 2002 reform also introduced new teaching and evaluation methods. The Norwegian Agency of Quality Assurance (NOKUT), in operation since the early 2000s, is currently responsible for monitoring quality in the sector (see below). The Quality Reform's measures also included a new governance regime, that provided increased independence for institutions, and a performance-based funding system in education and research (see below) (PC, 2015).

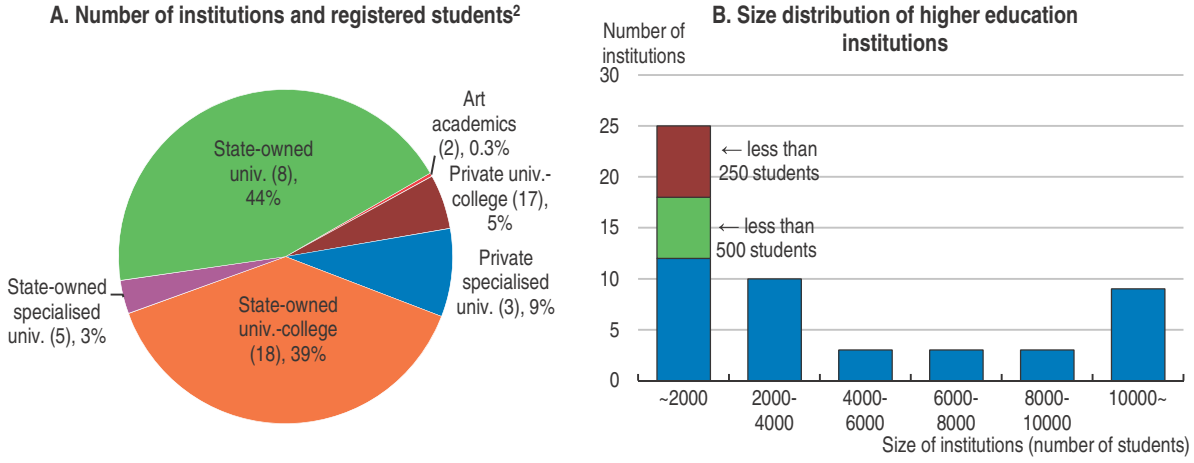
Spending on tertiary education is comparatively high both in terms of annual expenditure per student and as a share of GDP (Figure 1.1, Panels B and C). The difference in total public tertiary expenditure *vis-à-vis* other countries is largely due to subsidies for living costs (scholarships and grants to students/households and student loans), amounting to around 1% of GDP (well above the OECD average) (Figure 1.1, Panel B).

Norway spends in total, as a share of mainland GDP, almost twice the OECD average, and somewhat more than the other Nordic countries (Figure 1.1, Panel B). Inclusion of the offshore sector lowers Norway's total tertiary expenditure as a share of GDP, though it remains relatively high in international comparison.

The structure of provision is fairly decentralised, creating inefficiencies and impairing quality

As of 2015, tertiary education in Norway was provided by 53 higher education institutions (universities, specialised universities and university-colleges), owned or funded by the government (Figure 1.2, Panel A) (Box 1.1), and over a hundred post-secondary/tertiary vocational institutions (fagskoler), offering shorter (up to two years) vocational training courses. In January 2016 some mergers have reduced the number of higher education institutions (see below). Universities and university-colleges are the two largest parts of the system. The post-secondary/tertiary vocational sector is still limited with about 16 000 students in 2013 (SSB, 2015a).

Figure 1.2. **Higher education institutions in Norway**[1]



1. 2015 data.
2. () refers to the number of higher education institutions; percentages refer to registered students in each type of institutions as a share of total students in higher education.

Source: Norwegian Social Science Data Services (2015), *Database for Statistics on Higher Education.*

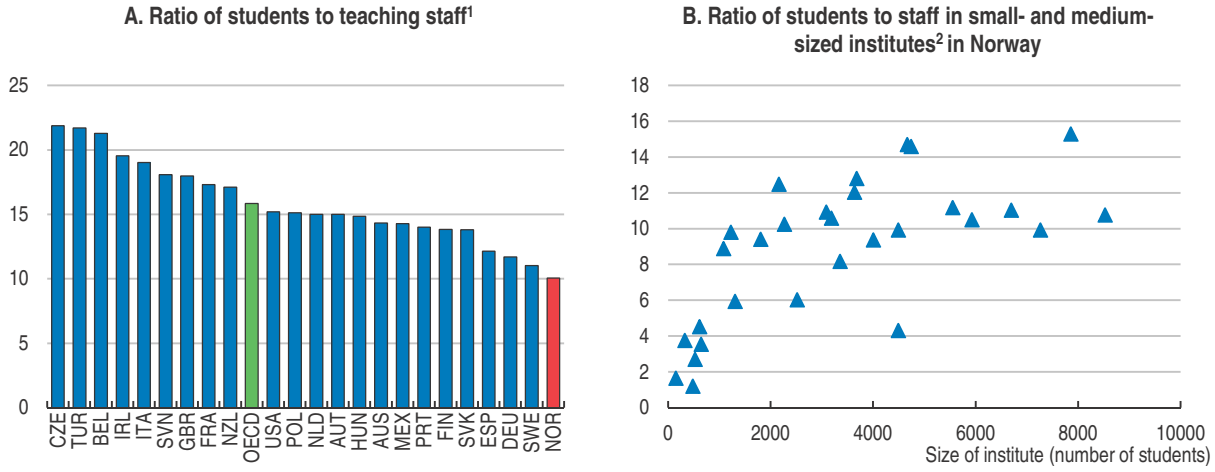
StatLink http://dx.doi.org/10.1787/888933314892

Higher education institutions are dispersed throughout the country and many of them are small. About half of the 53 higher education institutions have less than 2000 students and around one-fifth of them less than 250 (Figure 1.2, Panel B). This fairly decentralised institutional structure largely reflects Norway's strong commitment to supporting regional economies. Indeed, tertiary education policy was traditionally related closely to the broader policy objective of preserving the spatial distribution pattern of population (NMER, 2005). The geographical diffusion of higher education institutions is aimed at increasing tertiary participation in non-urban areas and reducing the "brain drain" towards the larger regions, such as Oslo and Akershus, and also to alleviate the pressure on the traditional universities (OECD, 2009a).

Scale of operation plays an important role in the quality and efficiency of education, according to *OECD Tertiary Education for the Knowledge Society* (Santiago et al., 2008). Although there is no optimal size, an important challenge is to ensure that institutions are of a sufficient size to promote regional development, and more generally, the quality of tertiary education system. Norway's many small academic environments and scattered education programmes raise important issues in this regard. A recent White Paper on the structure of higher education highlights a number of limitations (Government of Norway, 2015a). Some institutions, in particular, have difficulties in attracting both staff and students, resulting in underutilisation of campus facilities and producing only few graduates and little research (Government of Norway, 2015a; Myklebust, 2015).

Norway has a relatively low tertiary student-to-teacher ratio (Figure 1.3, Panel A), especially among the smaller institutions (Figure 1.3, Panel B). A minimum number of students for courses is often considered as a prerequisite for helping cost-effectiveness, as well as for broader curriculums and better quality of programmes and student services, although a simple causal relationship is difficult to establish (OECD, 2009b; Vabø and Kårstein, 2014; Government of Norway 2015a). The government considers that, as a general rule, it is not appropriate that fewer than 20 students are enrolled in any given course.

Figure 1.3. **Ratio of students to staff in tertiary educational institutions**



1. Belgium, the Netherlands, and Ireland include public institutions only. 2013 data.
2. Registered students per man-years teaching, research, dissemination, administrative, and supporting positions among tertiary educational institutes with less than 10000 students. 2013 data.

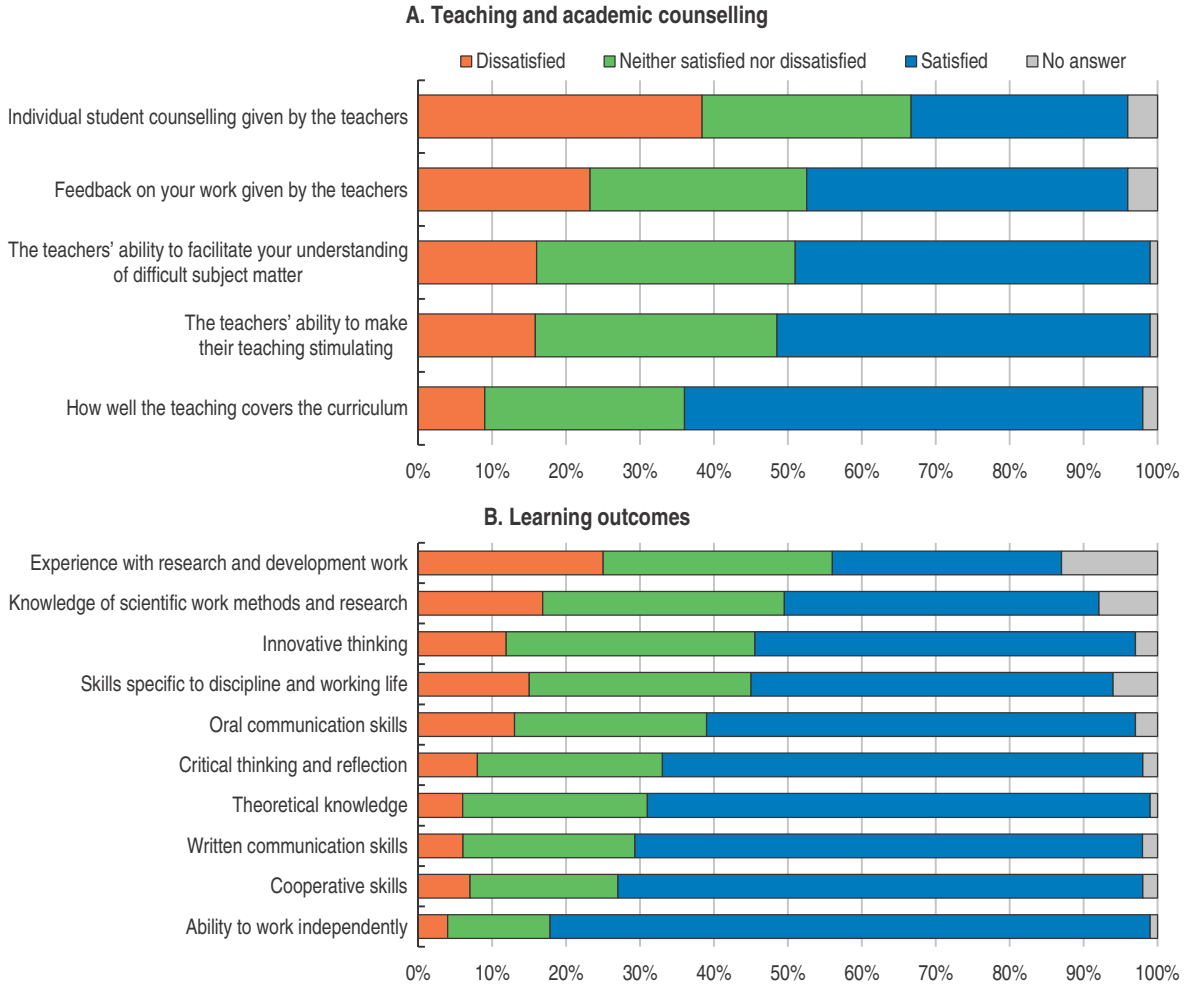
Source: OECD (2015), *Education at a Glance 2015*, Table D2.2; Statistic Norway, *Education statistics*.

StatLink http://dx.doi.org/10.1787/888933314909

The White Paper on the structure of higher education concludes also that smaller institutions suffer particularly from a lack of senior academic staff (i.e. professors, senior lecturers, professors and associate professors) (Government of Norway, 2015a). Overall, around 46% of employees in the university-college sector hold a doctoral degree, or have comparable academic qualification, on the basis of official data. This is not necessarily a problem, what matters is whether the teaching and learning experiences are of high quality. In this context, a national student survey of higher education (*Studiebarometeret*) reveals low levels of satisfaction with regard to teachers' feedback and individual counselling (Figure 1.4, Panel A) – both of great importance to acquisition of skills and knowledge

Figure 1.4. **Students' satisfaction on the quality of tertiary education**

National student survey results, 2014



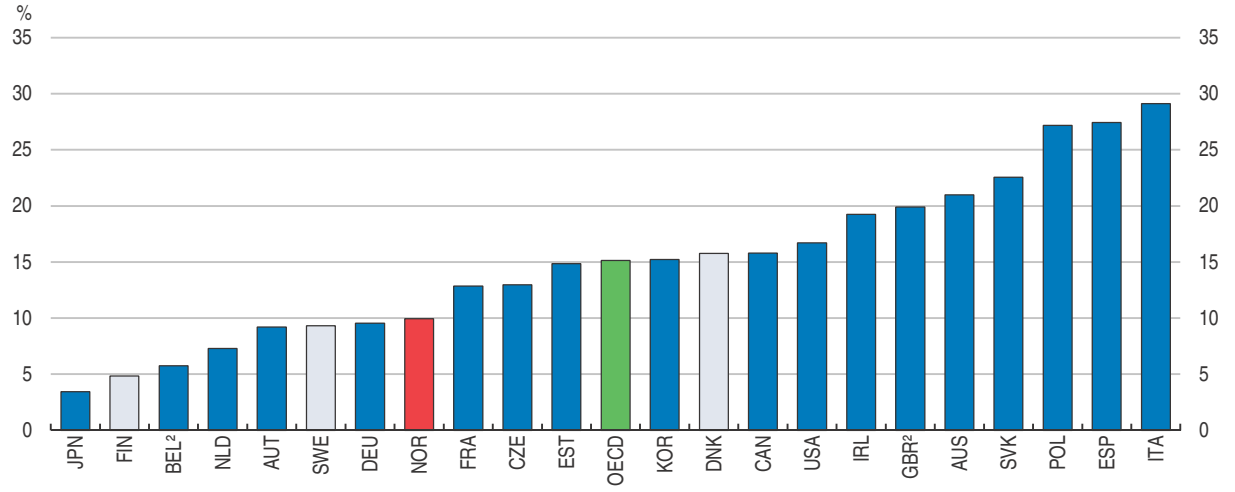
Source: Norwegian Agency for Quality Assurance in Education (2015), "2014 Studiebarometeret".

StatLink http://dx.doi.org/10.1787/888933314918

(Hamberg et al., 2015). In addition, the findings reveal relatively low scores in some critical areas which serve as proxies for learning outcomes, such as indicators of experience with research and development of work and measures of innovative thinking, suggesting scope for improvement (NOKUT, 2015) (Figure 1.4, Panel B). Moreover, the OECD's Survey of Adult Skills (a product of the OECD Programme for the International Assessment of Adult Competencies – PIAAC) shows that around 10% of 20-34 year-old tertiary graduates in Norway attain only low levels of literacy (level 2 or below) (Figure 1.5). While this finding may also reflect, among other things, shortfalls at earlier stages of education, and Norway fares better in the PIAAC survey than the OECD average (Figure 1.5), it is still worrying.

Furthermore, as noted in the White Paper, according to a large number of independent evaluations, many academic environments in Norway are "too small" to conduct internationally competitive research (Government of Norway, 2015a). Many of the evaluations highlight the importance of a "critical mass" in research. This assessment is backed up by the Research Council of Norway (RCN) which also notes that most of the successful research units in areas such as biology and medicine are typically large, and

Figure 1.5. **Share of young tertiary graduates with low literacy skill**[1]



1. Share of tertiary graduates aged 20-34 who scored literacy level 2 or below (with level 5 being most proficient) in PIAAC 2012. More details about proficiency levels are available in "The Survey of Adult Skills Reader's Companion" (OECD 2014).
2. The United Kingdom includes England and Northern Ireland only and Belgium includes Flanders region only.

Source: OECD, *PIAAC 2012 Database*.

StatLink http://dx.doi.org/10.1787/888933314920

flags concerns that the research landscape is "far too often" fragmented (RCN, 2011). Furthermore, international evidence also points to links between research quality and the size of the research group (Kenna and Berche, 2011a, 2011b). The "critical mass" (broadly defined as the minimum size for a research group to be viable in the longer term) varies substantially across subject areas. Once the critical mass is achieved, a research team has increased opportunities for intra-group interactions which, according to Kenna and Berche (2011a, 2011b), is a key driver of group quality. There is also a higher value ("upper critical mass"), also discipline dependent, beyond which the link between research quality and group size weakens (or even disappears) (Kenna and Berche, 2011a, 2011b).

In addition, many institutions have limited ability to tap into external funding (Government of Norway, 2015a). For example, only about 20% of Norwegian tenured faculty apply for funding from the Research Council of Norway (Benner and Öquist, 2014). In general, Norwegian higher education institutions are less successful than similar institutions in other Nordic countries in the competition for funding from EU programmes (NMER, 2014). In addition, many institutions have a relatively low overall participation in international network co-operations (Government of Norway, 2015a). Despite a rapid rise in research activity over the past decade or so, Norway still ranks below the other Nordic countries in terms of some key research indicators (see below).

Reforms underway to restructure the higher education sector (see below) aim to overcome these difficulties, and improve quality, while maintaining accessibility throughout the country.

A more integrated system has blurred distinction between institutions

Norway's tertiary education system is more "integrated" compared, for instance, to those in Denmark and Finland (Ahola et.al, 2014). There are few barriers to the recognition of credits and study programmes between higher education institutions (universities and

university-colleges), enabling students to combine courses and institutions and transfer between them. It is also possible for students who have achieved a two-year vocational tertiary education to automatically access higher education in academic tracks (see Box 1.1). Integration of the two types of higher education institutions has been a policy goal over an extended period (OECD, 2009a). This is reflected, for example, in the adoption in 1981 of a flexible credit transfer system, entitling college graduates to further their education at the university level, and the inclusion in mid-1990s of state university-colleges under the same act as universities (Act for Universities and University-Colleges), providing a common framework for the organisation and governance of these institutions (Kyvik, 2009).

Increased integration, however, has blurred the boundaries between universities and university-colleges, raising concerns about the diversity, and potentially quality, of the sector (OECD, 2012a). Common rules and regulation for the higher education sector, for instance, under the Act for Universities and University-Colleges (Box 1.1), facilitated student mobility but also increased standardisation across the two sub-sectors (Maassen et al., 2011). University-college sector curricula had to adapt to meet the formal requirements for transferability and recognition by the universities, weakening the distinctive role of university-college sector as a more practically-oriented type of tertiary education (OECD, 2012a).

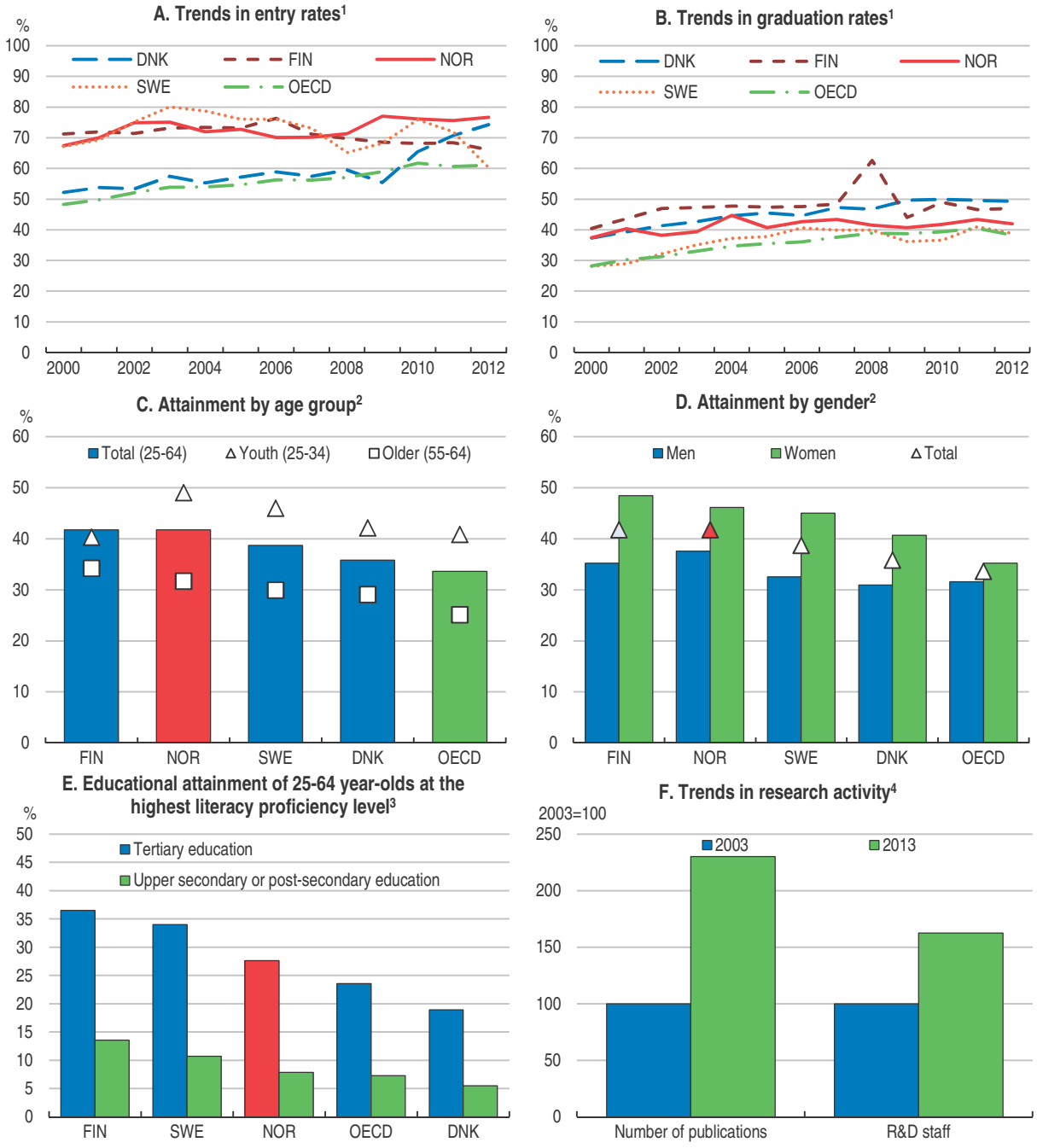
The divide between universities and university-colleges has also become blurred following the introduction of institutional accreditation in 2002 (under the "Quality Reform" in higher education, see Box 1.1) which opened up the opportunity for university-colleges to acquire a university status. This has resulted in an "academic drift" in the university-college sector, both in terms of programmes at a higher level and of institutional hierarchy (NOKUT, 2013b). Four "new" universities have been established between 2003 and 2012, three of which being the result of an upgrading in the status of university-colleges (Box 1.1). At the same time, universities have started to offer professionally related courses, besides the traditional academic programmes, in order to retain and attract more students (Maassen et al., 2011; OECD, 2012a).

High levels of tertiary attainment in the population and rising research activity

Norway's predominately public and tuition-free tertiary education system has encouraged participation, resulting in entry rates that are among the highest in OECD (Figure 1.6, Panel A). Graduation rates are above the OECD average, although they still fall behind those in some neighbouring countries (Figure 1.6, Panel B). Norway enjoys a comparatively high level of tertiary attainment. In total, over 40% of adults aged 25-65 had completed this level of education in 2014, outperforming many other countries (Figure 1.6, Panels C). This share is higher for younger adults (25-34 years) than their older counterparts (55-64 years) and for women than men (Figure 1.6, Panels C and D). As one might expect, those with tertiary education also have high skills: around 30% of tertiary-educated adults (25-64 year) perform at the highest levels in literacy proficiency (Level 4 or 5) compared to less than 10% in the case of those with a lower level of education (Figure 1.6, Panel E).

Developments in research activity are also encouraging. There was a steep rise in research production (as measured by publication activity) since 2003, while the total number of research and development (R&D) staff in higher education increased by approximately 63% from 2003-13 (Figure 1.6, Panel F).

Figure 1.6. **Tertiary education outcomes**



1. Entry rates and graduation rates include only tertiary-type A education (ISCED 5A), which is largely theory-based programmes designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements, such as medicine, dentistry or architecture. Duration at least 3 years full-time, though usually 4 or more years. Tertiary-level entry rate is an estimated probability, based on current entry patterns, that a young adult will enter tertiary education during his or her lifetime. Graduation rates represent the estimated percentage of an age cohort that is expected to graduate over their lifetime.
2. Educational attainment is the percentage of a population that has reached a certain' level of education. 2014 data.
3. 2012 data.
4. Number of publications: citable publications only. R&D staff: higher education only (full-time equivalent).

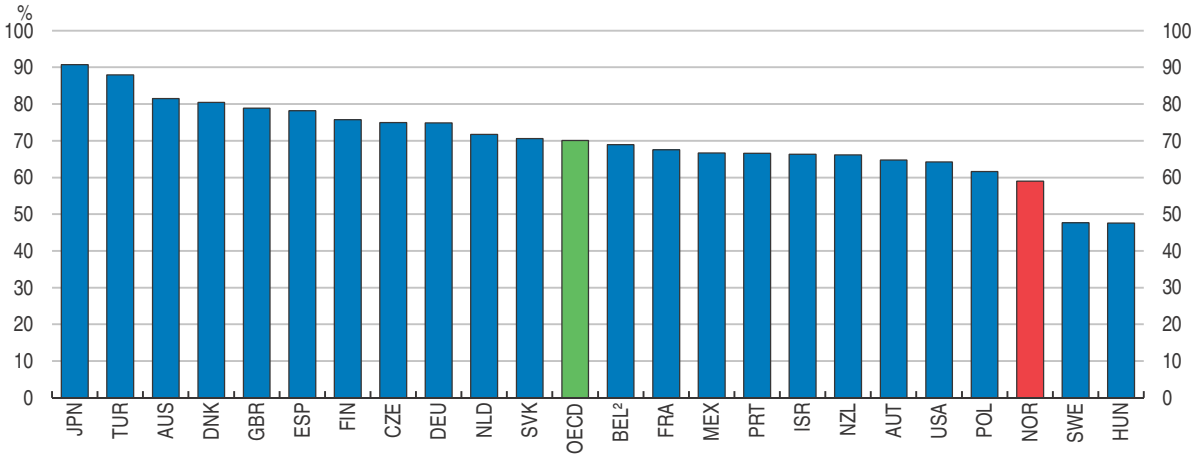
Source: OECD (2014), *Education at a Glance 2014*, Tables C3.2a, A3.2a, and A1.6a (L); OECD (2015), *Education at a Glance 2015*, Tables A1.4a and A1.3b; SCImago, *SCImago Journal & Country Rank Database*; OECD (2015), "Main Science and Technology Indicators", *OECD Science, Technology and R&D Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933314934

But relatively low degree completion rates and long time to completion

Internationally comparable data on completion rates indicate that Norway is below the OECD average (Figure 1.7). National statistics show that less than half of the bachelor's degree students who enrolled in 2009 completed their studies within 3 years, rising to 65% for completions within 5 years (SSB, 2015b) (Figure 1.8). While these shares have increased in recent years (Figure 1.8), a relatively large number of Norwegian students still spend more than the expected time to complete a degree. More than half of those not-completing their studies within 5 years drop out.

Figure 1.7. **Completion rates in tertiary education**[1]



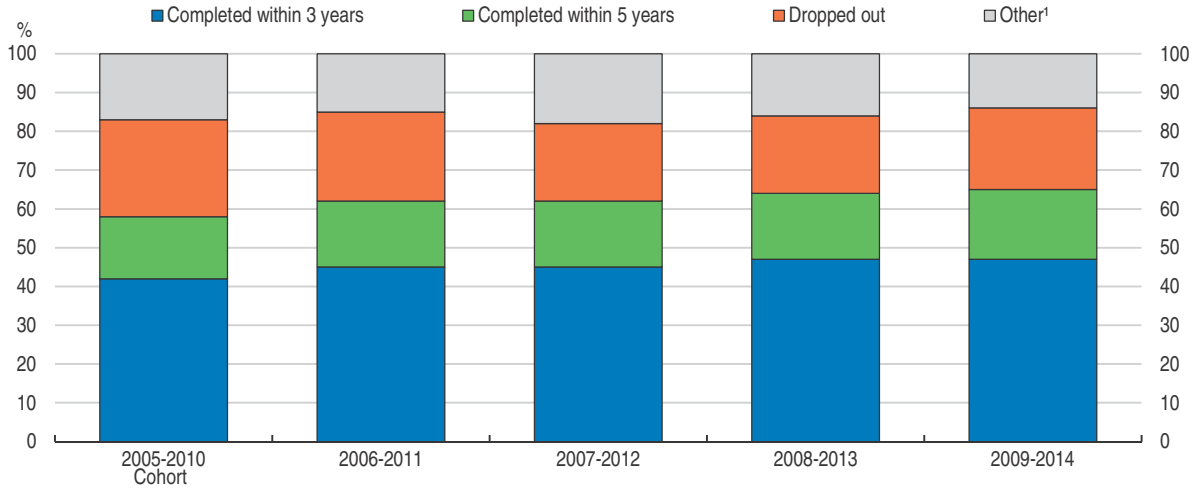
1. Completion rates in tertiary-type A education, which represent the proportion of those who enter a tertiary-type A programme and who go on to graduate from at least a first tertiary-type A programme. 2011 data.
2. Belgium (Flemish Community).

Source: OECD (2013), *Education at a Glance 2013*, Table A4.1.

StatLink http://dx.doi.org/10.1787/888933314945

Figure 1.8. **Tertiary completion status**

Among students who enrolled in a bachelor´s degree programme for the first time



1. Still enrolled in one of the selected or other tertiary programmes or awarded another qualification.

Source: Statistics Norway (2015), "Throughput of Students in Tertiary Education".

StatLink http://dx.doi.org/10.1787/888933314956

Non-completion and late completion of degrees can reflect various factors such as insufficient academic preparation prior to enrolment, inadequate career guidance, and a slow study progression (Hovdhaugen, 2012; OECD, 2014a; PC, 2015). In Norway's case, however, a key factor is that the cost of trying and failing tertiary education is low because there are no tuition fees and jobs are easy to come by. This generates high demand for tertiary education, but means little attention may be paid to completion (and perhaps also to the vocational aspect of courses when choosing what to study). Hovdhaugen (2012) identifies work commitments as the most common reason for dropping out from tertiary education in Norway, which is indicative that the healthy job market is indeed a factor behind non-completion or slow study progression. These outcomes are not necessarily negative as they can reflect students successfully combining work and study.

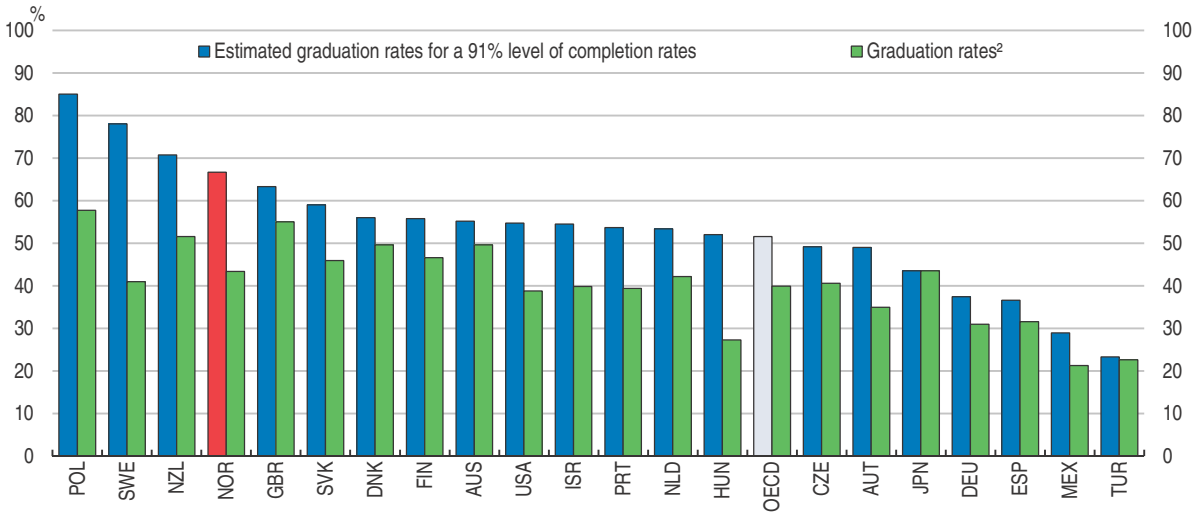
In addition to student incentives, late completions may also reflect the high degree of flexibility of the tertiary education sector as this allows for changes in the study programmes and facilitates taking breaks ("stop-outs") in studies (NMER, 2005). Available data (Eurostudent IV) show, for instance, that more than one in 10 students in Norway had an interruption of longer than one year during their studies, exceeding the corresponding shares in other Nordic countries (Orr et al., 2011). A flexible system can have several advantages, notably giving a student the opportunity to make another choice along the way and consider an alternative study programme that is more in line with his/her interests. There are challenges to completion, however, as students are more likely to drop out the longer they take to finish their studies (Hovdhaugen, 2012). In Norway, students are typically somewhat older, not only when they graduate, but also when they commence their studies. The latter arises because many young Norwegians take a period off from study after they finish upper secondary school in order to travel or work, for example (OECD, 2009a). Half of the Norwegian tertiary education students are aged 25 years and over. Older students may take more time to complete their studies, as they usually organise them according to their work schedule and financial constraints (Orr et al., 2011).

Some caveats on the completion figures are important to consider. Some of the students who have not graduated may be still enrolled, or may have finished their education at a different institution than the one they started at. This is especially the case in tertiary education systems with flexible structures as in the Norwegian one, where transfers are common (Hovdhaugen, 2009, 2011, 2013). Still, non-completions raise efficiency and quality concerns as they can represent a waste of financial and human resources (Tremblay et al., 2012). The long time to completion heightens these concerns. Late completions are an important factor for drop outs in Norway (Hovdhaugen, 2012). OECD estimates suggest large gains in terms of graduation rates from an increase in Norway's completion rates to best international level (Figure 1.9).

Students' social background still counts

As elsewhere, students' socio-economic background has a bearing on participation and performance in tertiary education. While complete removal of these influences is practically impossible, disadvantages and gaps generated by socio-economic background need to be eroded further. Data from Statistics Norway suggest for instance that in 2014, 60% of 19-24 year olds with at least one parent having more than four years of tertiary education entered tertiary education, compared to slightly over 16% among those whose parents only have compulsory education (Figure 1.10, Panel A). This disparity has been declining over time, especially for women, but is still very large (Figure 1.10, Panels A

Figure 1.9. **Estimated graduation gains from raising completion rates to best international level**[1]



1. Estimations based on a 91% level (Japan) of completion rates at tertiary-type A level of education, considering that the level of entry rates remain constant. Latest available data are for year 2011.
2. Tertiary-type A programmes (first-time graduates) graduation rates, which represent the estimated percentage of an age cohort that is expected to graduate over their lifetime.

Source: Author's calculations based on OECD (2013), *OECD Education at a Glance 2013*, Tables A3.1a and A4.1.

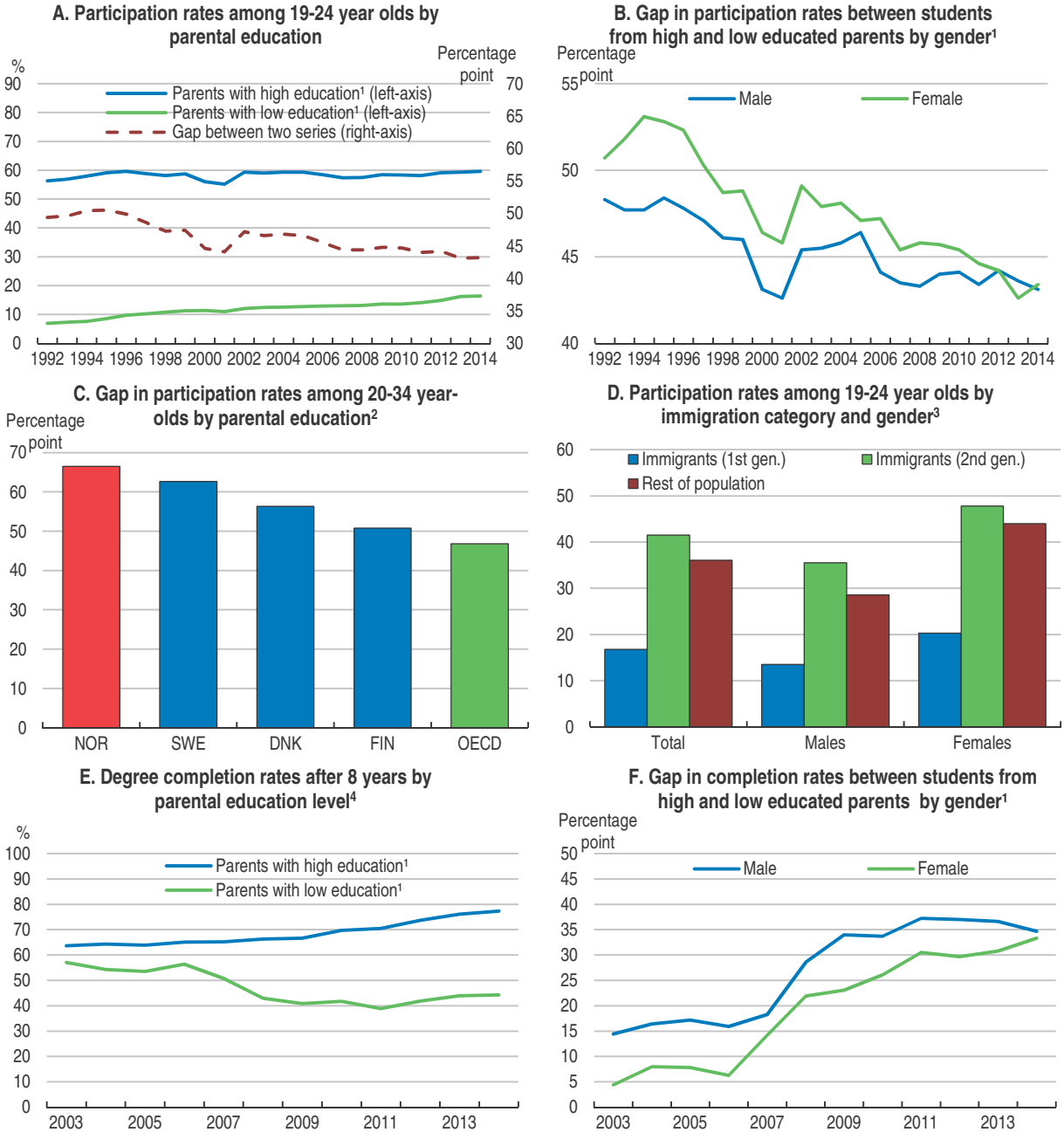
StatLink http://dx.doi.org/10.1787/888933314962

and B). International comparisons also indicate relative large differences in tertiary participation according to parents' educational attainment (Figure 1.10, Panel C). The immigration status of students also appears to influence tertiary participation, according to the data from Statistics Norway for the 19-24 year-old cohort, especially in the case of women (Figure 1.10, Panel D). The difference in attendance rates between first generation immigrants and students without an immigrant background stands for young women at over 20 percentage points, compared to 15 percentage points for young men. It is worth noting that second generation immigrants is the group with the highest participation, and this applies for both genders.

Completion rates also differ according to students' educational background, with students from well-educated families performing comparatively well. Indicatively, of the new students in 2006 whose parents were highly educated (more than four years of tertiary education), around 80% had completed their studies after 8 years, against 45% of students whose parents only had compulsory education (Figure 1.10, Panel E). Interesting this discrepancy has fallen in recent years for men but increased for women (Figure 1.10, Panel F). A recent study further points to social differences with regard to the type of study, with students from less educated families being more likely to attend professional three-year programmes rather than longer ones (Hovdhaugen, 2013). To the extent that such programmes enable students from less educated backgrounds to make a smooth transition into a good quality jobs and careers, however, this should not be a concern.

Access and success in tertiary education can also be influenced by student's early schooling (OECD, 2014a). Recent results from national tests indicate, for instance, that students whose parents do not have tertiary education achieve lower average scores in both reading and mathematics compared to their peers whose parents are highly educated (Figure 1.11). This highlights the importance of addressing inequalities in learning opportunities at the earliest stages of schooling.

Figure 1.10. **The impact of social background on tertiary participation and completion**



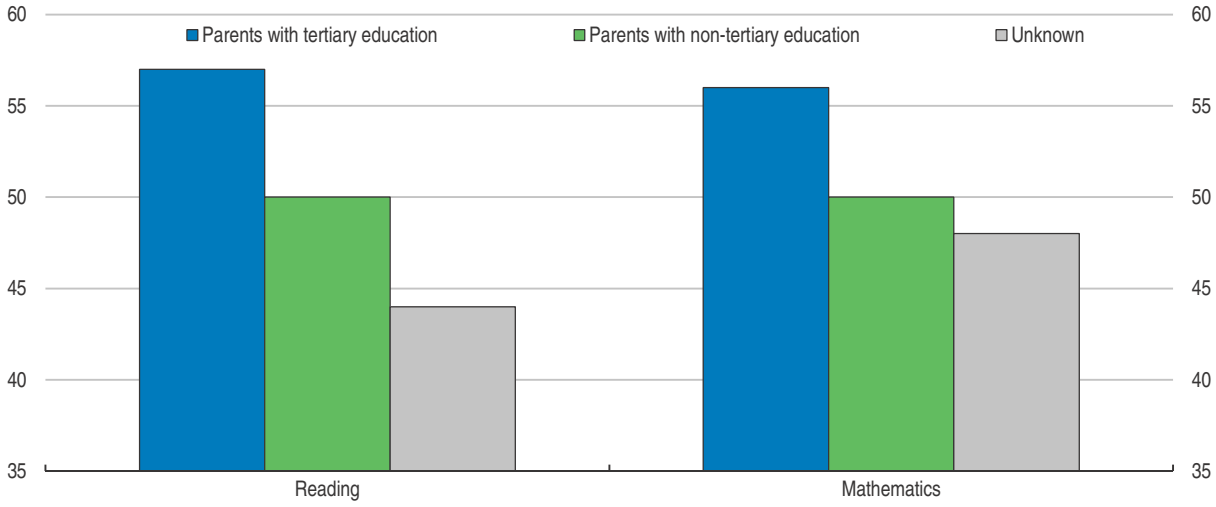
1. High educated: Mother or father has more than four years of tertiary education. Low educated: Mother or father has primary and lower secondary education.
2. Gap between young adults whose parents have tertiary education and those whose parents have education attainment below upper secondary education. 2012 data.
3. Includes only students registered as residents in Norway as of 1 October 2014.
4. Degree completion rates for tertiary programmes lasting 2-4 years, tertiary programmes longer than 4 years, and doctorates.

Source: Statistics Norway (2015), *Students at Universities and Colleges Statistics*; Statistics Norway (2015), "Throughput of Students in Tertiary Education"; OECD (2014), *Education at a Glance 2014*, Table A4.1.

StatLink http://dx.doi.org/10.1787/888933314979

Figure 1.11. **Performance of ninth-grade students by parents' education**

Average score points on national test, 2014



Source: Statistics Norway, *Education Statistics*, Table 10794.

StatLink http://dx.doi.org/10.1787/888933314980

Responsiveness of the system to future labour-market demand is a challenge

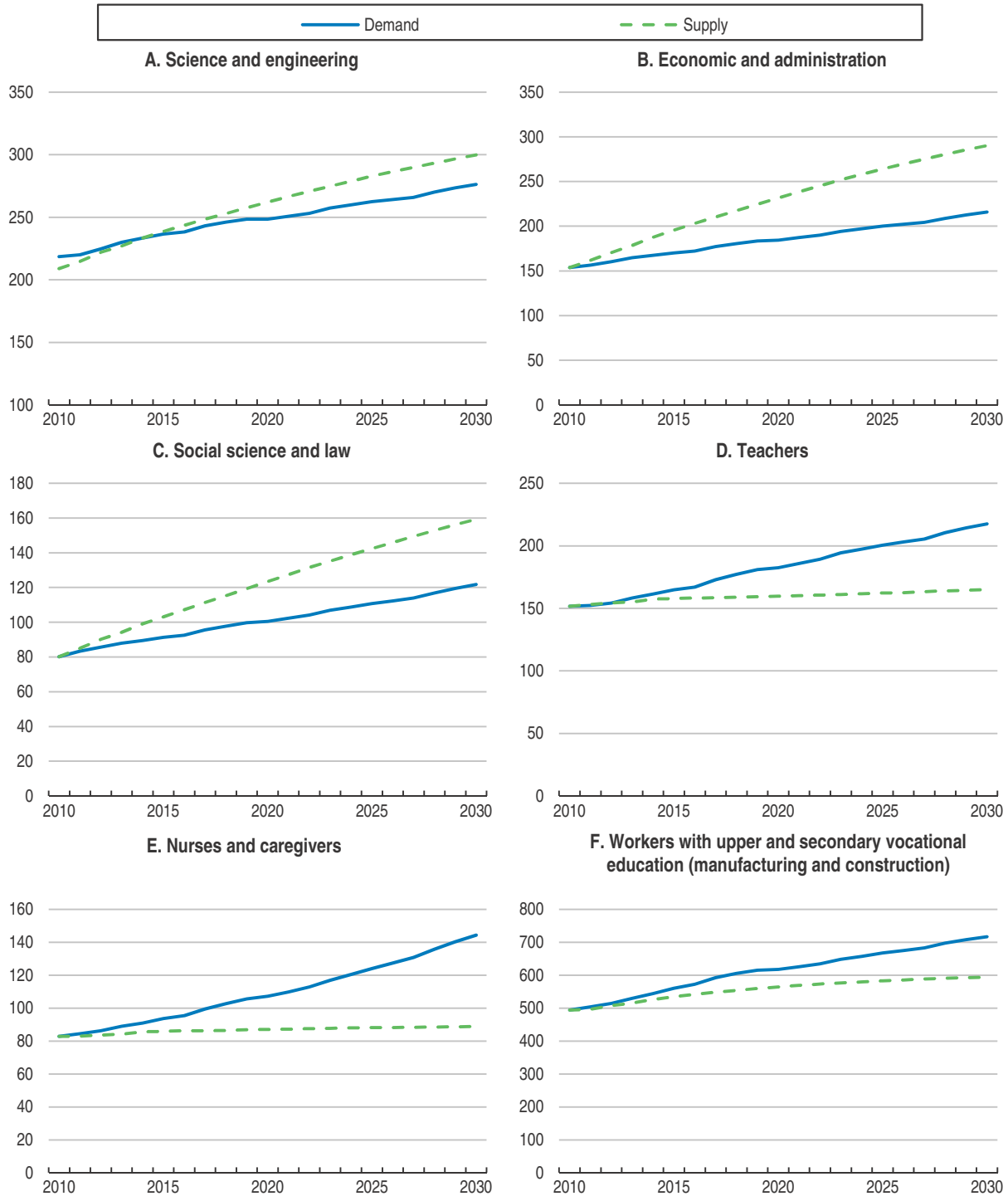
Overall, the supply of tertiary graduates in Norway has developed broadly in line with demand from the labour market (Cappelen et al., 2013). However, supply shortages for some oil-related positions, in particular engineers, have long been an issue (PC, 2015). Company survey data show, for example, that in 2010 there was an unmet demand of about 9 500 workers with engineering and science degrees (Cappelen et al., 2013). The problem has since been reduced by a supply response in terms of engineering graduates (see discussion below). The current slowdown in oil investments has also lessened the scale of supply shortages. If current trends continue, there may be a more balanced growth (and even a small surplus) in the years to come between the demand and supply of engineers and people with backgrounds in science, according to long term skills projections of the Statistics Norway (SSB, 2013, 2014) (Figure 1.12, Panel A).

However, according to these projections, which should be interpreted with caution given their sensitivity to changes in underlying assumptions, the supply of graduates in the fields of economics and administration and social sciences and law is set to overshoot in the next decade or so (Figure 1.12, Panels B and C), but to undershoot in some of the more "practical" courses, namely, teachers and nurses (Figure 1.12, Panels D and E) (SSB, 2013, 2014). The long term skills projections also indicate a shortage as well of workers with upper secondary vocational education, probably due to the low completion rates, as discussed in previous *Surveys* (OECD, 2008a, 2014b) (Figure 1.12, Panel F).

There has been a promising upward trend in enrolment in STEM fields (science, technology, engineering and maths), which are important for driving innovation (Figure 1.13, Panel A). A comparatively strong labour market in recent years for those with quantitative skills in Norway, along with reforms to boost STEM fields, partly explains this upward trend. Such reforms include an increase in higher education places on maths, science and technology, a new framework for engineering education, and a write off of teachers' student loans if they have an advanced degree in subjects like maths (Government of Norway, 2015b). Despite this progress, more efforts may be needed to boost

Figure 1.12. **Norway's future skills, demand and supply projections**[1]

Thousand persons

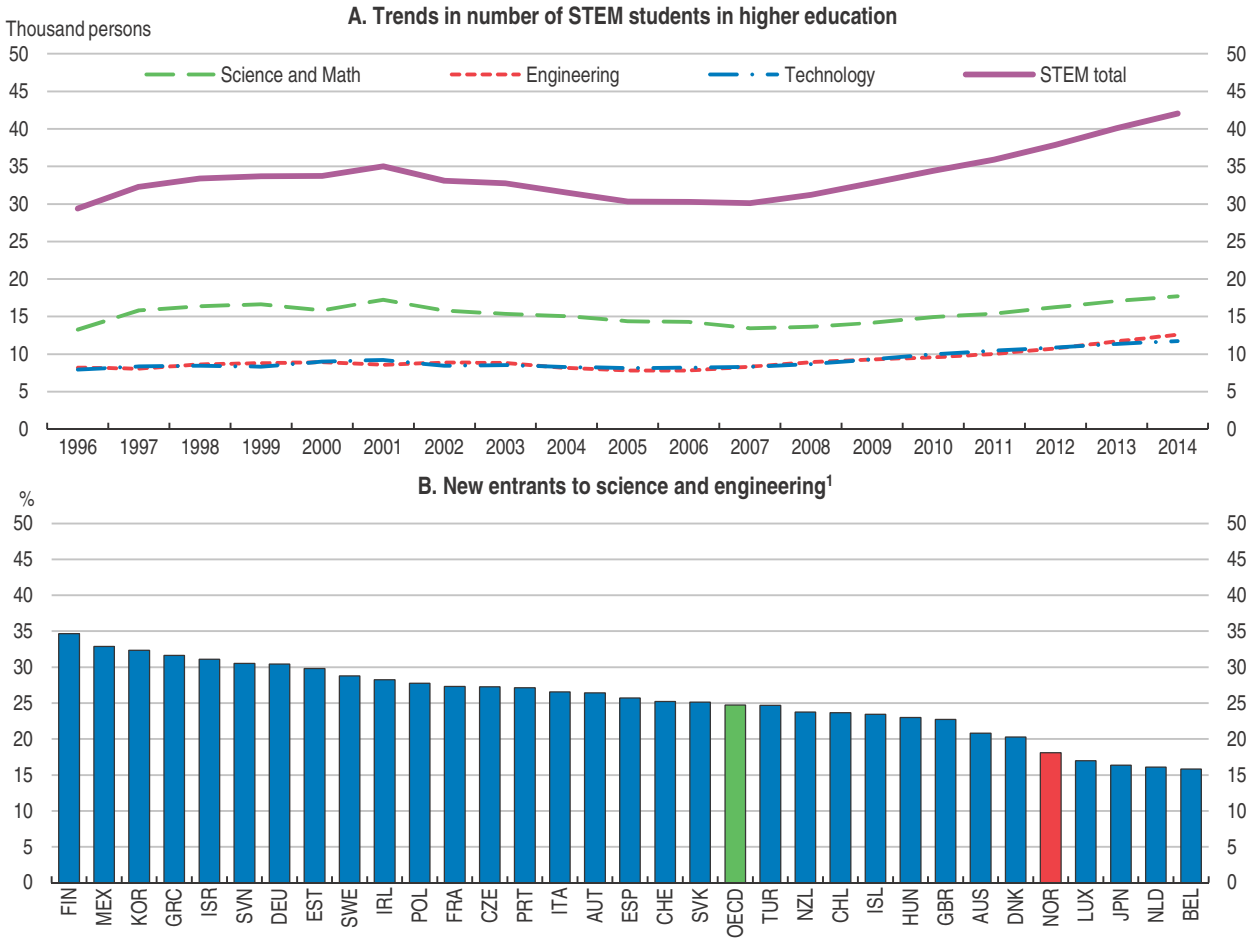


1. Demand for labour is projected by a multi-sectoral macroeconomic model that captures linkages between industries and supply of labour is projected by a dynamic microsimulation model that predicts labour participation rates and educational choice based on individual characteristics.

Source: Statistics Norway.

StatLink http://dx.doi.org/10.1787/888933314999

Figure 1.13. **Student enrolments in tertiary education and trends in STEM disciplines**



1. Australia, France and Italy exclude tertiary-type B programmes; Belgium, Ireland, the Netherlands, Poland and Spain exclude advanced research programmes. Science and engineering correspond to ISCED 1997 Field of Education 4 and 5. 2012 data.

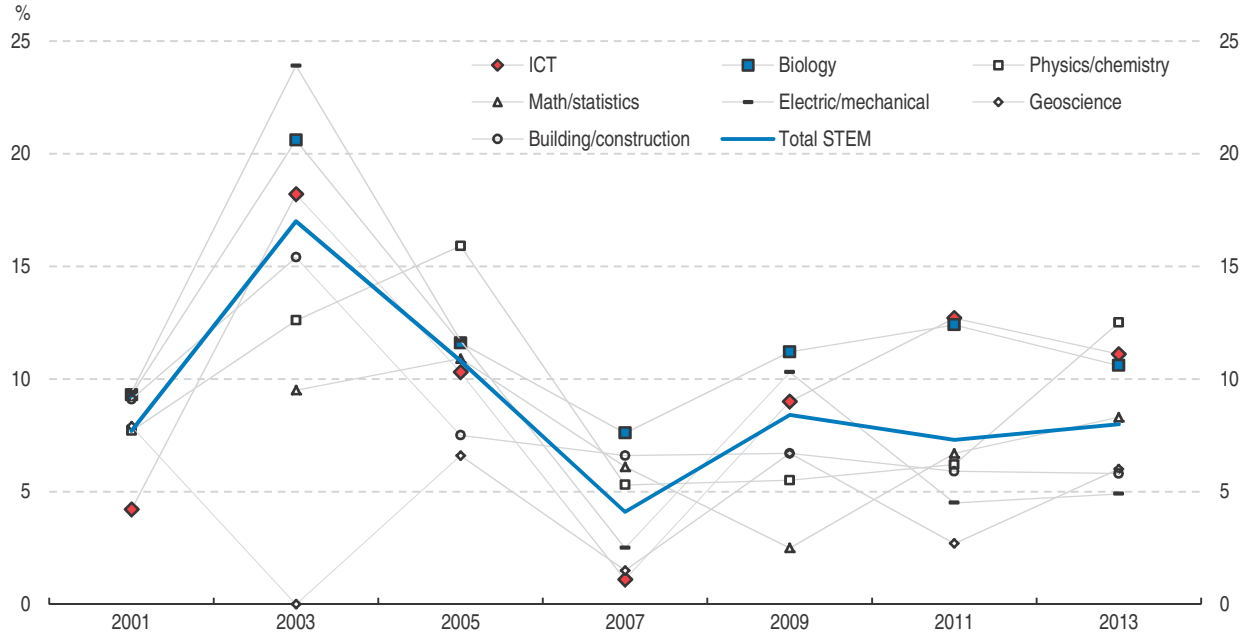
Source: Norwegian Social Science Data Services (2015); OECD (2014), *Education at a Glance 2014*, Table C3.3a.

StatLink http://dx.doi.org/10.1787/888933315008

STEM enrolment as Norway is still below the OECD average (Figure 1.13, Panel B). Demand for these skills is expected to increase in the years ahead (OECD 2008a, 2014c). In addition, there are complications in using long-run projections for assessment. Figure 1.12 (Panel A) suggests that, as a whole, there will be an excess supply of scientists and engineers. However, this largely reflects assumptions in the projection about shrinkage of the oil sector and corresponding fall in demand of oil-related STEM professions. At the same time, care is needed in developing STEM-related policies. Disaggregated data show quite different labour market outcomes across STEM disciplines, which vary over time (Figure 1.14). Also, signals from the data can be mixed. For instance, recent business and graduate surveys reveal that employers claim for sizeable shortages in certain skills, such as information and communications technology (ICT), even where there is a relatively high unemployment rate among graduates in these fields (Figure 1.14).

Addressing skills shortages, wherever they arise, is important for Norway's ability to be internationally competitive. A weak response of skills development to labour-market demand can reflect a number of interrelated factors. It may be the case, for example, as

Figure 1.14. **Unemployment rates among graduates with master's degrees in STEM**



Note: Biennial graduate survey results, 6 months after their graduation.
Source: Nordic Institute for Studies in Innovation, Research and Education (2014), Graduate Survey 2013.
StatLink http://dx.doi.org/10.1787/888933315017

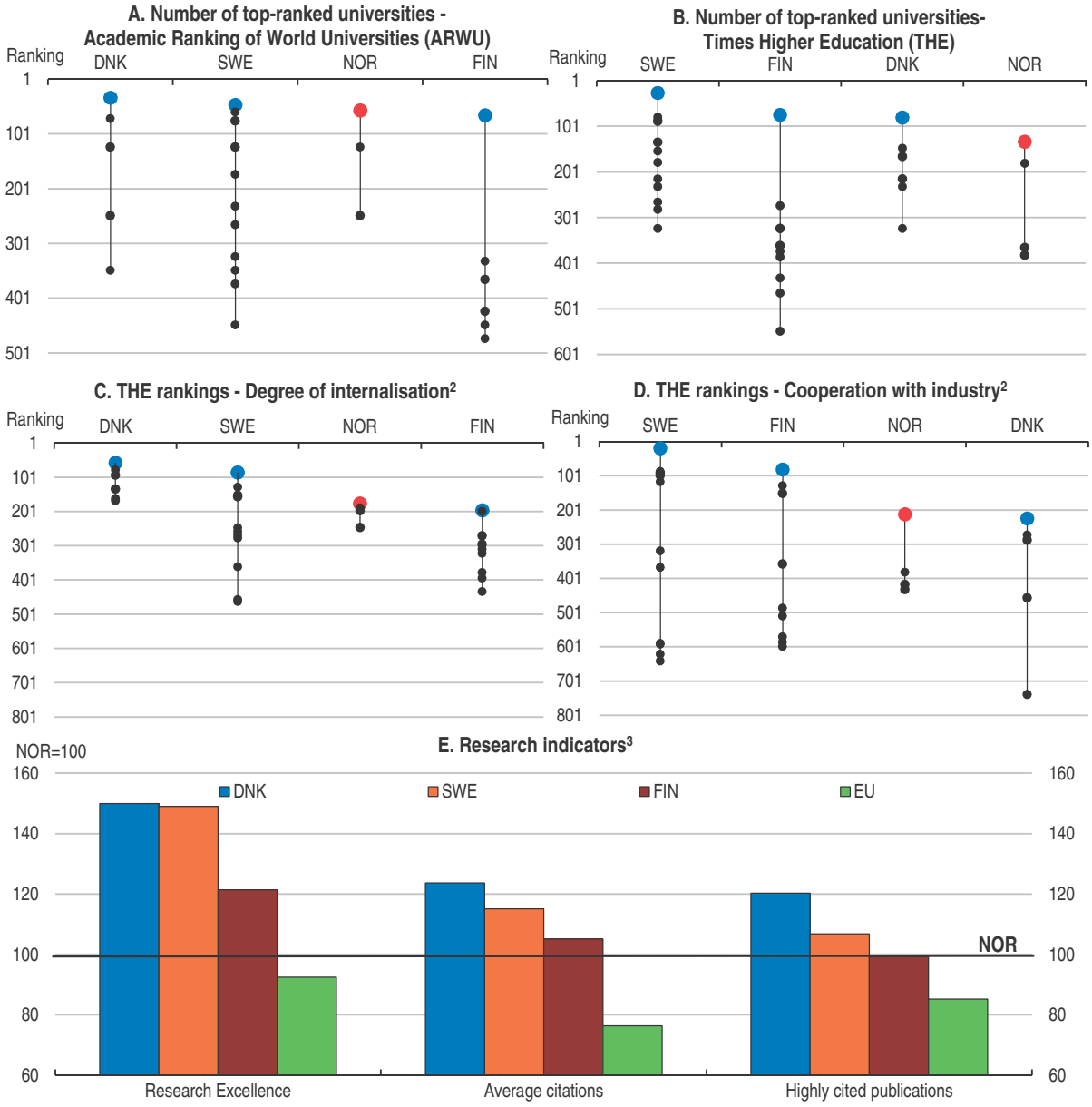
noted in the *OECD Skills Strategy Diagnostic Report for Norway* (OECD, 2014c), that students' attention to the job-market "pay-off" in choosing courses is weakened because they do not have to fund their own studies, although the recent increase in STEM provides some encouraging signs in this regard (OECD, 2014c). But other factors, such as inadequate career services and/or weak market signals due to low unemployment and compressed wage distribution in Norway, may also contribute. Beyond these possible reasons, however, it may also be the case that the consumption-good aspect of tertiary education (enjoyment of study and learning) is a comparatively big driver of tertiary education choices for Norwegian students compared with the investment-good dimension.

International academic credentials are relatively low

Norway has fewer universities than its Nordic neighbours in a ranking of top universities on the basis of research-related indicators and other indicators, such as the degree of internationalisation of higher education institutions and their ability to transfer knowledge to, and attract funding from, the business sector (Figure 1.15, Panels A to D).

Measures of research quality, such as the European Commission index of research excellence (which covers the quality of scientific production as well as technological development) and average cited publications, place Norway above EU average but still below its Nordic peers (Figure 1.15, Panel E). In addition, high-impact research, as defined by the share of national publications in a field that are in the field's 10% most cited publications globally, is relatively low compared to neighbouring countries (Figure 1.15, Panel E). Norway's research ranking is the result of multiple factors. A recent analysis of the Norwegian university research environments by the Research Council Norway (RCN), for instance, cites inward looking leadership, relatively few international recruitments, administrative barriers, the extensive teaching tasks in faculties and the predominance of

Figure 1.15. **World top university rankings[1] and research indicators**



1. Number of universities in each country that are ranked in the world top 800 (THE) and 500 (ARWU). The ranking of each country is depicted on a line connecting the highest and lowest ranked ones among world top 800/500 universities. The overall score is calculated as a weighted average of 13 and 6 relevant indicators for THE and ARWU, respectively. 2015 data.
2. The degree of internationalisation ("International Outlook" category in the THE ranking) measures the share of international students and staff and also international collaboration. The co-operation with industry ("Industry Income" category in the THE ranking) measures a university's ability to help industry with innovations, inventions and consultancy, and such knowledge-transfer activity is captured by looking at how much research income an institution earns from industry (adjusted for PPP), scaled against the number of academic staff it employs.
3. Research Excellence: a composite indicator for scientific and technology, which consists of four sub-indicators (highly cited publications, Top 250 universities, PCT patent applications and ERC grants received), for 2010. Average citations: average citations per document published during 1996-2014. Highly cited publications: 10% most-cited papers in each scientific field during 2003-12.

Source: Author's calculations based on Times Higher Education (THE), "World University Rankings 2015-16" and Center for World-Class Universities at Shanghai Jiao Tong University, "The 2015 Academic Ranking of World Universities (ARWU)"; SCImago, *SCImago Journal & Country Rank Database*; OECD (2015), "Main Science and Technology Indicators", *OECD Science, Technology and R&D Statistics* (database); EC (2013), "An Analysis of National Research Systems (I): A Composite Indicator for Scientific and Technological Research Excellence", Figure E1; OECD (2015), *OECD Science, Technology and Industry Scoreboard 2015*.

StatLink http://dx.doi.org/10.1787/888933315023

small research groups with limited external funding among the factors that can be impeding high-impact research (Benner and Öquist, 2014). The report further highlights the importance of a rigorous scientific quality control of sectoral projects.

Promoting efficiency and quality in higher education

Plans to merge institutions are a positive step

The Norwegian authorities aim to deal with the quality challenges arising from the many small academic environments and scattered education programmes. This is to be achieved by reforming the structure of higher education institutions by merging a number of institutions and other measures such as reforms in the funding system and stricter accreditation requirements (discussed further below). As of January 2016, the total number of higher education institutions has been reduced from 53 to 42. Further merging initiatives are under consideration (Government of Norway, 2015a). The first wave of merger proposals was initiated by the institutions themselves, though with input and encouragement from the government (which also ultimately approves the proposed mergers) in the form of assessment of the strength of institutions using a range of quality criteria, including the number of applicants, completions and publications. The government has signalled that institutions standing alone after a first round of mergers could be reassessed and ultimately merged in a government-driven process. The process underway mainly concerns university-colleges merging with universities or other university-colleges (Government of Norway, 2015a). Overall, the merging process will result in a significant remapping and re-organisation of the higher education sector, and in a reduced number of institutions.

These mergers echo previous developments in Norway and also in a number of other countries. For instance, mergers have featured in tertiary education reform in the other Nordic countries as well as Australia, the Netherlands, and the United Kingdom (Kyvik and Stensaker, 2013) (Box 1.2). However, it seems that there is not a definitive answer when it comes to the outcomes of mergers (Box 1.2).

Ensuring good conditions for successful mergers is important. Good outcomes in the merger process will require, on the basis of the international experience, careful selection of partners, adequate and sufficiently flexible financial support during the merging process, and an effective management and leadership (Box 1.2). It is welcome, in this context, that the merging process currently underway in Norway is based on concrete performance criteria, as described above.

The financial support to be provided to the merging institutions is also welcome. The upfront costs of mergers, including those for upskilling staff and organisational changes, usually tend to be substantial, while any financial benefits tend to be long term (Skodvin 2014; Finnegan, 2015). All the institutions involved in the merging process are provided with additional support from the government. Sufficient financial flexibility is very important given that the mergers differ in nature and size (Skodvin, 2014).

Closely monitoring the outcomes of the merging process is essential given mixed experiences (Skodvin 1999, 2014 and Box 1.2). To meet its objective, the reform should pave the wave for more high-profile institutions with better access to research facilities and more efficient and better quality tertiary education outcomes. More solid higher education institutions will be also better prepared to cater for regional needs and development.

Box 1.2. **Mergers: International trends and experiences**

Mergers among higher education institutions have been common in OECD countries in recent decades. Indeed, Norway itself saw a significant wave of mergers in 1994, when 98 colleges that offered mainly professional programmes (for example, teaching and nurse training and general engineering) were consolidated into 26 state university-colleges (Kyvik and Stensaker, 2013). Furthermore, since the early 2000s university-colleges have opted (voluntarily) for a university status that also involved mergers (NOKUT, 2013b). Other countries have also experienced important merging processes. In Denmark, for instance, mergers in 2007 saw 13 government research institutions and 12 universities merged, respectively, into 3 government research institutions and 8 universities. Furthermore, in 2008, the 22 Centres for Further Education were merged into 8 Regional University-Colleges (Amaral, 2009; Finnegan, 2015). In the Netherlands, reforms have seen mergers between research-intensive universities and universities of applied science (Santiago et al., 2008). In Finland, Aalto University was created in 2010 as a merger of three universities and aimed to foster multi-disciplinary education and research in the fields of science, economics and art and design. Australia and the United Kingdom have also used mergers in major restructuring efforts to build larger and more comprehensive institutions (Santiago et al., 2008). Furthermore, there has been a wide variety of international collaborations and arrangements between universities across borders with the aim to strengthen performance and add economies of scale in teaching and research.

Mergers vary in character. They can take place between institutions of a comparable or different size; and between institutions with similar or complementary profiles and/or statuses (Pruvot et al., 2015). Governments used (and still use) mergers for a variety of reasons, for instance, to address low efficiency and quality, and overcome problems of institutional fragmentation (Harman and Harman, 2003). Institutions themselves also initiate mergers to address financial problems or for more strategic reasons, such as to strengthen the institution's position at the national and international context (Skodvin, 2014).

In general, according to Skodvin (2014), the merging process is expected to result in: "administrative" benefits (for example, savings with regard to human resources due to economies of scale and a more professional and efficient administration); "economic" benefits (save money); as well as, "academic" benefits, including eliminating duplicative programmes, strengthening research and teaching, increasing academic collaboration/integration, and diversifying academic profiles. Potentially, there are strong technical synergies to be gained from mergers derived, for example, from the pooling of academic talent, greater staffing/and or financial resources and better access to scientific equipment, which can help raise the quality of education and research (Government of Norway, 2015a; Pruvot et al., 2015).

However, evidence on the outcomes of mergers is unclear (Goreham, 2011). Empirical studies show that experiences with mergers in Norway and several other countries are "quite mixed", and this finding refers not only to their intended economic and administrative benefits, but also intended improvements in the quality of higher education and research (Skodvin 1999, 2014) – which is a central aim of the Norwegian reform. Overall, mergers are complex, resource-intensive, and time consuming processes which require a number of pre-conditions to succeed. While there is no single solution for all merger cases, cross-country experience could be helpful in this regard.

Some lessons learned from international experience

International experience suggests that the approach taken to process in institutional mergers has a significant bearing on their success, in particular:

Planning and design

- The motives and objectives of mergers need to be stated with clarity and be, generally, valid and accompanied by a detailed planning of the process (Melin et al., 2013; Skodvin, 2014). *Inter alia*, this helps keep up reform momentum.

Box 1.2. **Mergers: International trends and experiences** *(cont.)*

- Voluntary mergers generally work better than the compulsory ones, often initiated by external threats (for example, those related to falling student demand and competition), or some degree of government incentive, pressure, or direction (Harman and Harman, 2003). Ideally all institutions involved in merger negotiations should have some gains from the process.
- Where merging institutions have complementary missions and cultures, the chances for succeeding are far greater (Skodvin, 2014).
- Geographical proximity remains important despite advances in communication technology. International experience suggests that most successful mergers took place between institutions which were physically not far from each other, or in the same place (Skodvin, 1999).

Effective implementation

- Strong management and leadership are key for effective implementation of merger plans and help reducing the uncertainty and stresses on staff and systems that accompany mergers (Skodvin, 2014). Key management staff should be appointed at the early stage of the process to increase effectiveness (Melin et al., 2013).
- Involvement of the staff, and students, is of great importance for the merging process, helping to boost internal support and willingness to co-operate (Melin et al., 2013).
- Mergers work best if the participating institutions can move quickly (Harman and Harman, 2003). A certain pace is essential to maintain momentum (Melin et al., 2013).

External funding

- External financial support helps institutions strike merger deals and smooth merger processes. Transition costs can be substantial, especially in areas such as harmonising pay and benefit systems, ICT-systems, and upskilling of personnel (Skodvin, 1999, 2014; Finnegan, 2015). Financial flexibility and access to adequate resources are of major importance during the merging process (Skodvin, 2014).

Enhancing the effectiveness of governance and leadership

A new system of institutional governance was introduced in 2003 as part of a wider reform on higher education (the "Quality Reform", see Box 1.1). The new system gave institutions more autonomy in internal organisation and leadership. For instance, it gave greater leeway for providers to appoint management and for external representatives on boards (Bleiklie et al., 2011; Maassen et al., 2011). Institutions can now choose between the traditional governance model of an elected rector (who automatically becomes chair of the board, and is invariably an existing member of staff) and a model which combines an external chair appointed by the Ministry of Education and Research and a rector (who has responsibility for both academic and administrative matters) who is appointed by the board. Increased autonomy was accompanied by a new funding system and stronger monitoring mechanisms through the establishment of a national quality assurance agency (both discussed below).

Despite these efforts, the system of higher-education governance falls short of the mark on some fronts. According to Norway's Productivity Commission, the system still does not adequately promote quality improvement (PC, 2015). In particular, the Commission highlights an apparent inconsistency between efforts by government to stimulate competition for students and research funding in tertiary education, but meanwhile an absence of mechanisms to bring about closure of weak educational or research programmes. There are also concerns about increased bureaucratisation; growth

in administrative positions has been rapid, typically outpacing increases in teaching and research positions (PC, 2015). Potential reasons for this are increased reporting requirements, in tandem with enhanced institutional autonomy under the Quality Reform (Box 1.1), the fast growth of the higher education system and an increased scope for externally funded research (PC, 2015; Stensaker, 2015).

However, neither the governing bodies of educational institutions appear to have made, so far, extensive use of the room for strategic manoeuvre offered to them under the Quality Reform, including the right to choose a more managerialist internal governance structure. On the basis of available information, only half of the institutions appear to have appointed rectors, so far. Still, there seems to be more deep changes at lower levels, with the majority of the institutions having introduced appointed leadership at faculty and department levels (Bleiklie et al., 2011).

The government believes that a management model that combines an external chairman and an appointed rector assures the recruitment of the most qualified management team and advocates this as the main model for higher education institutions. A proposition that changes the Act on Universities and University-Colleges by making appointed leadership the main, but still optional, model for recruitment at Norwegian higher education institutions is in the parliamentary process. This move goes into right direction. A more managerialist governance structure helps institutions adjust and develop business in a reorganised higher-education sector. Moreover, an appointed rather than elected leader may find it easier, according to an OECD study, to implement important changes that cut across vested interest, though the process of appointment is crucial to ensure leader's credibility within the institution (OECD, 2003). International experience also highlights the importance of strong management and leadership for the effective implementation of the merging process, and the need for key management staff to be appointed at the early stage of the process (Box 1.2). Moreover, having a single chief executive, the rector, being responsible for all matters (academic and administrative) within the institution, as is envisaged by the "preferred model", would strengthen management and accountability, according to the 2009 OECD *Review of Tertiary Education of Norway* (OECD, 2009a). In light of the apparent advantages of this alternative management model, the government should consider financial incentives for institutions that adopt it, monitoring closely outcomes.

Fostering efficiency and quality through the funding system

Most of the revenue (around 80%) of Norwegian higher education institutions comes as a block grant from the central government. Institutions also receive various forms of external funding, including from the Norwegian Research Council, European Union and private projects and donations (Reichert and Ekholm, 2009). Following reform in 2002, the government's block grant, in broad terms, comprises: i) "basic" funding, based on specific priorities over time for the institutions; and ii) "performance-based" funding (education and research incentives), determined by a number of indicators, such as study credit points, student exchanges with foreign institutions and research publications (Box 1.3). At present, the basic funding accounts for about two-thirds of the government financing and the performance-based funding the remaining one third.

Box 1.3. **Funding arrangements for higher education institutions**

Higher education institutions in Norway are funded directly by the Ministry of Education and Research. The funding aims to cover most of the costs necessary for the running of the institutions. Following international trends, Norway introduced a performance-based component to funding in the early 2000s and this basic structure has been retained since then. A main goal of the 2002 reform was to increase student progression and improve quality (NMER, 2005).

The university funding system comprises a block grant with three components, which each vary from year to year and differ in importance between institutions (Table 1.1), reflecting the division of labour between more research-based universities and more teaching-based university-colleges (Reichert and Ekholm, 2009). Specifically:

- The "basic component", covers on average 70% of the total allocation and is based on the institution's historical budget level. The allocated amount covers funding for core tasks education (including teaching), operation and maintenance of premises, and research and innovation. One "plus" of this type of allocation is that it provides stability and predictability (OECD, 2008b), however there are drawbacks too (see below).
- The "education component", covers on average 24% of the grant to institutions and is based on study credit points (ECTS credits) obtained by students at the institutions and international mobility (student exchange). The budget for education incentives is open-ended and aims to provide an incentive to universities and university-colleges to offer education of high international quality.
- The "research component", covers on average around 6% of the grant to institutions and is granted on the basis of the number of publications, PhD-graduates, ability to obtain funding from the EU research programmes, and ability to obtain funding from the Research Council of Norway. Funding for research incentives is based on a fixed-limit budget.

Table 1.1. **Funding components by type of higher education institutions**[1]

Percentage

Type of institution	Long term strategic grant (basis)	Education incentives	Research incentives
Universities	70	21	9
New universities	70	27	**3**
Specialised universities	69	28	3
University-colleges	71	28	2
Mean	**70**	**24**	**6**

1. The Norwegian Ministry of Education and Research.

The funding model adopted in 2002 is better than previous arrangements on several fronts. There is stronger focus on results rather than inputs and better transparency in the allocation of funds across institutions (at least with regard to the performance-based allocations) (Santiago et al., 2008). The 2002 reform also sought to enhance institutional autonomy and flexibility by making the board of each institution responsible for the management and use of their total block grant.

However, the current funding scheme is criticised by some as rigid and static. A recent study by the Research Council Norway notes, for instance, that universities flag concerns that room for manoeuvre is limited as, at departmental level, funding is tied primarily to positions and only a fraction of university researchers receive substantial funding in addition to this (Benner and Öquist, 2014). Moreover, a public consultation on the findings of a recent report on the funding of higher education and research – conducted by an expert group which was commissioned by the government in 2014 to review the system – showed that a majority of university-colleges (and some universities) are in favour of reform to the "basic" component of the funding model. Specifically, they favour the adoption of a formula-based approach using a mapping of activities to costs (a view not shared by the government, as discussed below) (Expert Group, 2015). Some institutions argued, for instance, that the current funding model is inflexible and outdated, failing to adjust to the increased complexity and importance of goals of these institutions. In addition, given the increased time devoted to research in the "new" universities, it is argued that the amount designated for research in the basic component of the funding should be increased for these universities, aligning it more closely to that for the older ones. At present, former university-colleges that have received a university status are still funded in a broadly similar way as university-colleges (Reichert and Ekholm, 2009). There are also questions about the transparency of the elements of the basic funding; for instance, the infrastructure portion is said to vary enormously across institutions. To an extent, this reflects that the older universities generally own and manage their properties, while the "new" universities and university-colleges rent their buildings.

As for the impact of the funding system on higher education outcomes, the expert group notes an overall increase in production of study credits over the past 10 years (Expert Group, 2015). This, however, is mainly due to an increase in the student numbers rather than an increase in their performance (i.e. a rise in the number of credits per student per year). Around 35% of Norwegian students still do not finish their degree within the expected time (Figure 1.8). It appears, therefore, that current incentives still make it attractive for institutions to focus on producing credits rather than on course completion.

In terms of research, the expert group on funding concluded that the 2002 reform prompted an increase in the number of scientific publications and doctoral candidates, but it did not bring about a major increase in the quality of research (Expert Group, 2015). As mentioned earlier, inward looking management practices or administrative barriers may provide some explanation (OECD, 2009a; Benner and Öquist, 2014). The fixed-limit budget envelope for research incentives (unlike the open budget for education incentives) under the current funding system (Box 1.3) may also impact on outcomes. The Productivity Commission suggests political intervention in the allocation of research funds may be diminishing the efficiency of resource allocation (PC, 2015).

The expert group report also underscored the fact that the current funding system does not promote differentiation in institutional profiles, as it provides similar incentives for all institutions (Expert Group, 2015; Hedda, 2015). However, the expert group concluded that concerns that the funding system prompts excessive bias towards inexpensive courses at the expense of, for example, natural sciences, or that it generates grade inflation were not well founded (however, the report does express concern about the differences in grading practices between institutions).

In light of its assessment, the expert group recommended maintaining the basic structure of the current financing structure, but with some new features and parametric adjustments (Expert Group, 2015). In particular the group suggested, among others:

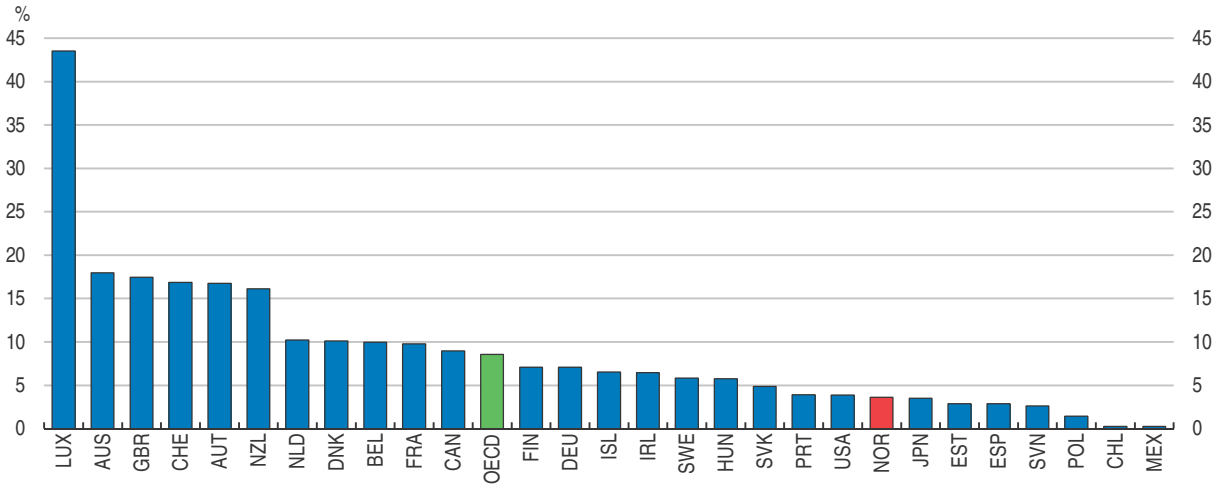
- Introduction of a funding mechanism based on multi-year performance agreements ("contracts") between the Ministry of Education and Research and each higher education institution, aiming to incentivise differentiation and quality improvement. The three main elements of such agreements are the development of quality in education and research, the development of collaboration with industry and society, and the development of institutional profiles (Hedda, 2015). The "contracts" would be valid for 3-4 years and a portion (probably 5%) of the "basic" component of the block grant to an institution would be linked to them.
- Changes to the calculation of the performance-related component of funding:
  - On the education dimension, introduction of an indicator reflecting the number of graduates, alongside the existing indicator of student credits (the latter would continue to be the most important part of the performance-based funding). The report also recommends changes in the field specific per credit bonus in favour of laboratory and equipment intensive fields. Moreover, the expert group report suggests strengthening incentives for international exchange of students (mobility indicator).
  - On the research side, the report notably suggests adjustments that increase incentives to attract EU funding and for high-impact publications and publications based on national and international co-operation.

The recommendations of the expert group, along with the outcomes of public consultation on the report, have been examined by the government. The government is particularly supportive of a system of multi-year performance agreements and will have a dialogue with the higher education institutions on the design of such agreements. It will retain the two main components of the current funding model – the "basic" and "performance-based" components – with plans to increase the latter over time (Government of Norway, 2015a). On the other hand, no changes are envisaged in the "basic" component of the current system, despite proposals by several institutions during the public consultation for a formula-based basic funding that would allow for a mapping of current activities and their cost assessment (see above). In the authorities' view (which provides support to the expert group's recommendation) a formula-based structure using national rates for various activities would not be appropriate to fund a diverse sector, as such rates would have to reflect averages. Moreover, such structure could bear on institutions' internal allocation of funds to the extent that these average national rates were perceived as normative (Expert Group, 2015).

Steps towards a funding system that promotes more efficiency and quality in higher education and research are welcome. Envisaged changes to the performance-based component of funding to strengthen incentives in key areas such as study completion go in the right direction. The new indicator on graduates, for example, proposed in the 2016 national budget, would be expected to reinforce current incentives for completion in the system linked to credit-production indicator, but the impact would need to be monitored and evaluated. Enhanced incentives for increasing international exchange of students, announced in the 2016 budget, are also welcome given the importance of mobility of highly educated individuals to knowledge circulation (OECD, 2015). Norway still ranks relatively low in terms of the share of international students enrolled in tertiary education (Figure 1.16).

Figure 1.16. **International students in tertiary education**

International student enrolment as a percentage of total tertiary enrolment[1]



1. International students are those students who moved from their country of origin (defined as the country of prior education or of usual residence) for the purpose of study. 2013 data.

Source: OECD (2015), *Education at a Glance 2015*, Table C4.1.

StatLink http://dx.doi.org/10.1787/888933315036

The government also envisages strengthening research incentives through changes in the calculation method of publication points (rewarding to a larger extent national and international co-operation), an open-ended budget for the number of doctoral graduates, and a new indicator for external funding – public and private – received by the higher education institutions. Changes in incentives for study completion, aimed directly at higher education students (rather than institutions), are also under consideration (see below).

The funding system could also be used towards other aspects of higher-education policy. Funding mechanisms could, for example, provide differentiated rewards to institutions for successful study outcomes for particular groups of students, such as immigrants. This could help address social differences in higher education, as noted by the 2009 *OECD Tertiary Education Review of Norway* (OECD, 2009a). Differentiated rewards could also be considered for specific courses that provide skills closely linked to labour market needs, such as certain subjects within the STEM disciplines, or nursing and teaching qualifications, by assigning a greater weight in the student-credit completions and graduations for these courses. This would make the system more responsive to changing needs. Building in graduate labour market outcomes to providers' funding formulae could also be considered.

The expert group's proposal for some funding to be allocated based on multi-annual performance agreements ("contracts") is a sound idea. If designed properly, such agreements have the potential to provide incentives to institutions to strengthen their areas of comparative advantage, quality, and interactions with business and community. These are difficult objectives to achieve through performance-based indicators in a formula-based system that is identical for the entire sector (Expert Group, 2015).

Experiences from countries, such as Austria, Germany Finland, and the Netherlands, that have used performance agreements to principally establish or maintain a diversified higher education system, suggest that these agreements can indeed work well (de Boer

and Jongbloed, 2014). Benefits not only arise from the agreements themselves, but also because the process of reaching agreement improves dialogue between the government and institutions and can increase transparency and accountability of tertiary providers (depending on the extent to which the negotiations and/or agreements are made public). However, success is not guaranteed. For instance, in Germany performance agreements have been rather similar across institutions and have not led to greater diversity and specialisation (de Boer and Jongbloed, 2014). Clear targets for the institutions concerned, with rewards only upon the achievement of results, are one ingredient to successful performance contracts. In addition, such agreements should not limit institutions' academic autonomy and flexibility through detailed requirements or increase administrative burdens (Expert Group, 2015). Engaging higher education institutions in the design of performance agreements, as envisaged by the government, should help guard against this.

It would be also important, from cost-effectiveness and quality points of view, to introduce mechanisms to ensure that weak study or research programmes are not renewed. Regular evaluations of the funding system for higher education are essential in this regard. At present, however, there are no sufficiently solid data on learning outcomes and quality improvements upon which to base such evaluations, but steps towards to this end (discussed below) are underway. These are welcome and should continue.

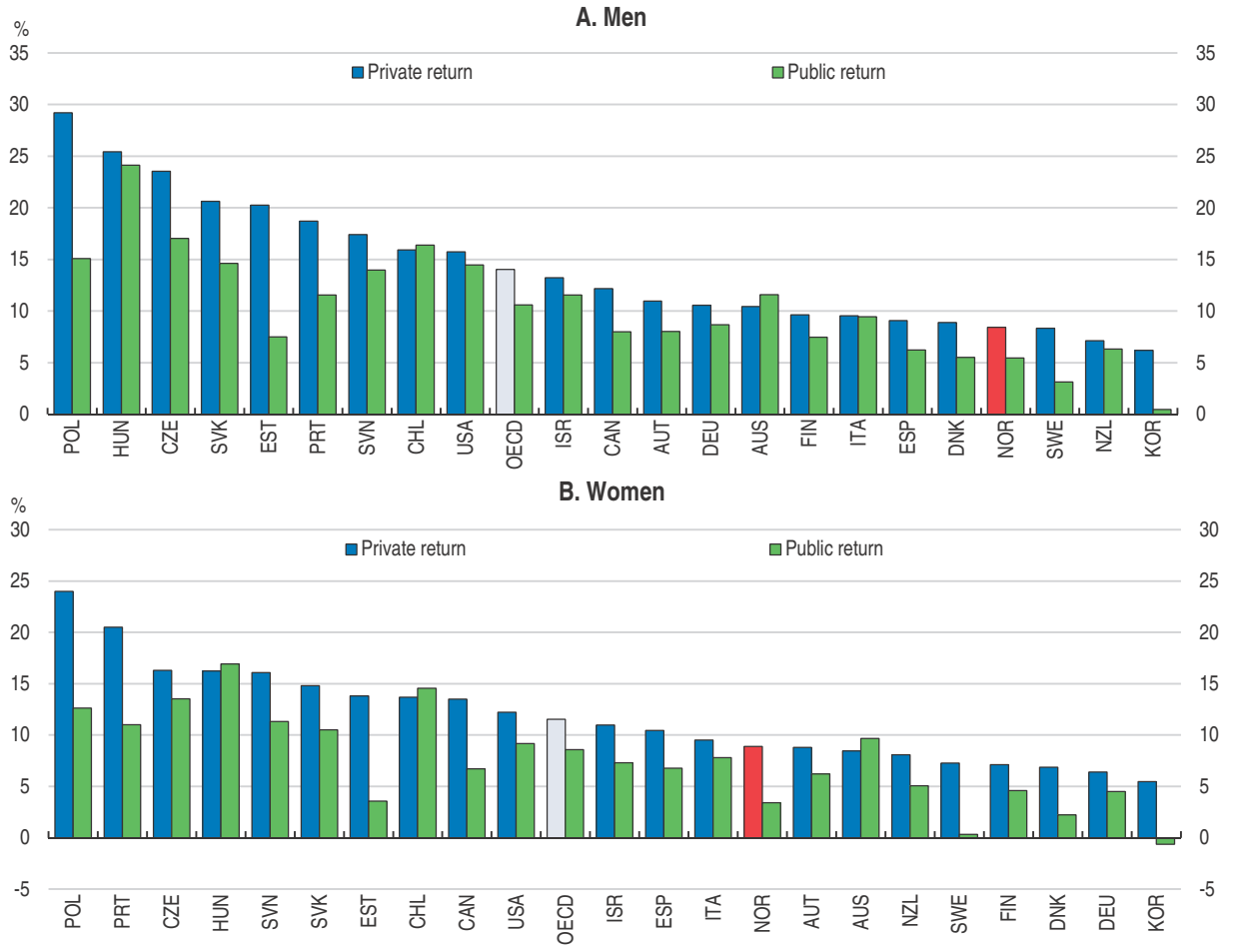
Improving students incentives for timely study completion

Relatively high subsidies (both explicit and implicit) to students taking tertiary education courses do not appear to have encouraged timely study completion. In addition, they are costly to the taxpayer. One way to see if this public spending is efficient is to examine the internal rate of return to education (Santiago et al., 2008). The OECD provides estimates of both public and private monetary rates of return per individual obtaining tertiary education using a net present value approach based on investment theory (Cheung et al., 2012; OECD, 2014a). Ideally, the value of non-monetary social benefits, such as greater overall life satisfaction, should be taken into account in the calculations, but these are difficult to quantify. Based on the OECD calculations, the returns to tertiary education, both the public and private ones, are lower in Norway than in most other countries, especially for men (Figure 1.17, Panels A and B). However, private returns to tertiary education are still sizeable.

In many countries the costs of tertiary education are shared between government and students through tuition fees (and also through the progressivity of the personal income tax) (Santiago et al., 2008; OECD, 2012b). A common justification for such fees is that individuals benefit financially from tertiary education because it gives them access to better-paid jobs and so, in the interest of fairness, students ought to contribute to the cost. Also, a suitably constructed system of tuition fees (accompanied by a scheme of income-contingent repayment of loans to overcome concerns about access to tertiary education) could improve efficiency and quality by encouraging timely completions and increasing students' expectations for value for money, while making them more receptive to market signals (OECD, 2014b, 2014c). In addition, tuition charges can widen the sources of funding for institutions, and can provide incentives to institutions to respond better to students' and labour market's demands and provide higher quality education (OECD, 2008a, 2009a, 2011).

Figure 1.17. **Internal rate of return of a person attaining tertiary education**[1]

As compared with a person attaining upper secondary or post-secondary non-tertiary education, in equivalent USD converted using PPPs for GDP



1. The internal rate of return indicates at what real interest rate the investment breaks even. 2011 data.

Source: OECD (2015), *Education at a Glance 2015*, Tables A7.3a, A7.3b, A7.4a and A7.4b.

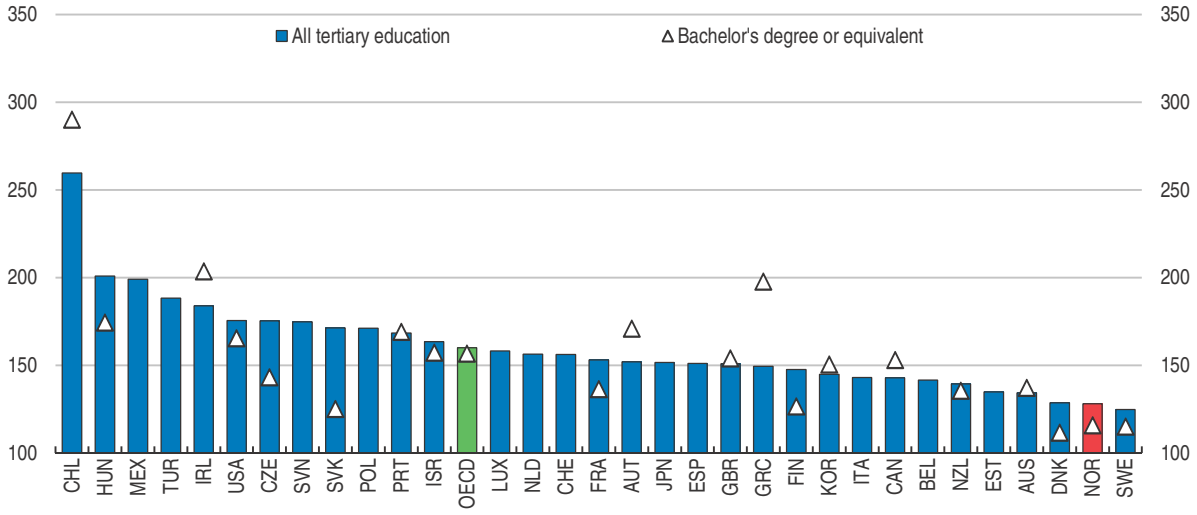
StatLink http://dx.doi.org/10.1787/888933315048

There have been successful transitions to fee systems. However, there are pitfalls. Knowing that students have comparatively easy access to loans and grants to pay tuition fees can prompt providers to ramp up the supply of courses, with little regard for course quality, and this may require additional mechanisms. The US *Gainful Employment* regulations, for example, aim to ensure that institutions improve their outcomes for students, or risk losing access to federal student aid (US Department of Education, 2014). Also, tuition fees' role in helping guide student choices can be weakened if (as is often the case) institutions set fees at the same level across most of the courses they offer (typical exceptions being medicine and performing arts) and, similarly, if there is little differentiation of fees across institutions.

A number of special factors militate against the introduction of tuition fees in the Norwegian context. The relatively high degree of wage compression in Norway, as in other Nordic countries (Figure 1.18), can reduce incentives to invest in higher education, justifying to an extent the large public subsidies to tertiary education (OECD, 2010, 2014a).

Figure 1.18. **Earnings premium from tertiary education**[1]

Adults with income from employment; upper secondary education = 100



1. Earnings of 25-64 year-old workers who attained tertiary education, relative to those who attained upper secondary education. 2013 data.
Source: OECD (2015), *Education at a Glance 2015*, Table A6.1a.

StatLink http://dx.doi.org/10.1787/888933315053

Also, the Nordic social welfare function places a high value on free and inclusive education and on delinking support for young adults from their parents' finances, which make the introduction of tuition and targeting support based on parents' income politically difficult.

However, there is room for policy initiatives regarding the loan-based support for students' living expenses. Indeed, adjustment to this support has already been used to encourage more timely completion of studies. Changes made in the early 2000s included the introduction of a mechanism allowing up to 40% of student loan to be converted into a grant subject to academic progress (Box 1.4). However, according to experts this did not significantly reduce study delays (Opheim, 2011). This may reflect the fact that other factors than financial incentives might weigh more on completions (such as the relative low participation cost to tertiary education in the absence of tuition fees) and/or design issues of the financial incentives. For example, the reform has increased the income threshold before the amount of grant is reduced, providing incentives for work perhaps at the expense of study time (Opheim, 2011). A previous reform rewarding for on-time completion (known as "turbo" reform) appeared to be more effective, although comparison of the two incentive schemes is difficult. The reform provided for a reduction of around 10% of the total loan amount for students who completed certain graduate programmes between 1990 and 1995 within a certain timeframe. According to Gunnes et al. (2011), the turbo scheme resulted in an increase of about 10% in students who graduated in stipulated time. The reform reduced delays of studies by 0.23 semesters per year treated (Gunnes et al., 2013).

The government is currently considering the recommendations from the Productivity Commission (PC, 2015) and the expert group on the higher education funding (Expert Group, 2015) regarding an additional incentive to students for completion of all degrees (besides the incentives planned for higher education institutions, as discussed above). Given the evidence, further experimentation with "turbo" type incentives (see above) in student-loan support, aiming to improve study completion, certainly seems

Box 1.4. **Student financial support**

Norwegian students (and under certain conditions, some foreign students) are entitled to financial support from the State Education Loan Fund for a maximum of 10 months per year (which will increase gradually from 10 to 11 months until 2020) and for a maximum of 8 years. The financial support amounted to NOK 97 850 (around EUR 10 600, assuming an exchange rate of 9.2) in academic year 2014-15. The support is meant to cover costs of living, as there are no tuition fees at public institutions. Students enrolled in private institutions may also apply for additional loans to cover the costs of fees. Around 90% of students take up the loans (Opheim, 2011).

Key aspects of the student support system are as follows:

- Students initially receive support as a loan but part of this loan can be converted into a grant (in effect the loan is partially written off) conditional on:
  a) Criteria relating to study progression (this dimension was introduced in the 2002 reform). As a main rule, 40% of loans are transformed to grants upon completion of semesters. Students are still entitled however for government support for up to one year's delayed study progression (Opheim, 2011).
  b) Student's income and assets (notably parental income does not play a role). Most notably there is an income threshold beyond which the conversion to grant is reduced.
  c) Whether students live with their parents or not; only students living away are eligible for the grants (those living with parents are eligible for student loans only). This appears to be a powerful driver of student choices, only around 10% of students are reported to be living with their parents.
- Loans are interest-free and no repayment is required before the completion of studies. Loan repayments are calculated on the basis of 20-years repayment on a flat-rate basis.

worthwhile. Student support could also be better linked to study requirements with a differentiation of the length of support, according to the standard duration of the courses. Other policy goals might also be achieved (at least partially) through further tweaks to the loan-support system, perhaps along the lines already in place that partially write off loans for students attending certain teacher training programs (STEM and foreign languages) and for graduate doctors who work in the northern counties. Discounts on loan repayment or grant conversions could be offered for students taking courses that are seen as having particularly high returns to the general public, such as certain subjects within the STEM disciplines and some professions where demand for graduates is likely to increase rapidly (long-term projections suggest this may be the case for nurses, for example); though selecting which subjects to support needs careful attention. Of course, the private return to education also depends strongly on wage prospects. In this context, Norway's narrow wage distribution has some bearing on student choices. Needless to say, uncertainties in the outcomes of reforming the financial incentives for students means any such changes should be carefully monitored and evaluated.

To reduce delayed completions it may also be necessary to increase higher education admission standards, which would make it more difficult for students with a low probability of completion to enter the system (PC, 2015). As mentioned earlier, PIAAC data show that a relatively high share of 20-34 year-old tertiary graduates has low literacy levels, although Norway fares better than the OECD average in this regard (Figure 1.5). Plans by the

government to strengthen admission requirements for applicants to science studies and teacher training education in science, as well as to bachelor programmes in nursing and journalist education are welcome in this regard, and should be implemented. A previous *Economic Survey* (OECD, 2008a) identified insufficient competence at entry to tertiary education as another potential reason behind the long duration of tertiary studies.

Ensuring good communication and data to help prospective students make informed choices is particularly important in Norway. Indeed, informing educational choices is one of the main skills challenges according to the *OECD Skills Strategy for Norway* (OECD, 2014c). Easily accessible databases to students on courses' outcomes, in terms of career and income prospects, and professional career guidance services, would facilitate more informed choices and contribute to higher completion rates. Making good use of existing data on labour-market trends would also help. Career guidance and counselling services are particularly important to address the information gap for students that come from disadvantaged backgrounds as such students often underestimate the net benefits of tertiary education (OECD, 2009a). A committee was appointed in 2015 by the government to investigate how the lifelong career guidance can be strengthened. It is due to report in April 2016.

Monitoring quality in the tertiary education sector

Mechanisms that monitor outcomes and respond to poor performance are critical for improving the quality of tertiary education. The establishment of the Norwegian Agency for Quality Assurance in Education (NOKUT) in the early 2000s, and legal requirements for tertiary education providers to run internal quality assurance systems (which are audited by NOKUT), had a positive impact on the "institutional quality culture", according to the 2009 *Review of Tertiary Education* (OECD, 2009a) (Box 1.5).

A recent evaluation report concludes that NOKUT complies with the majority of European Standards and Guidelines for quality assurance in higher education, but does highlight some areas for improvement (NOKUT, 2013c). In particular, NOKUT was advised to further strengthen auditing, as at present the design of audit process and criteria allow "room for interpretation"; and, to introduce "follow-ups of recommendations" in evaluation reports (NOKUT, 2013c). Also, the evaluation concluded that NOKUT's current legal and regulatory framework hampers adjustments to the existing quality assurance framework, and hence innovation. NOKUT has limited powers to alter the quality assurance framework without a lengthy process of co-ordination with the Ministry of Education and Research and the need for an approval from the government and parliament. Requirements that result in disproportionate time and resources spent on the evaluation of small institutions, which cater only few students, compared to the large ones, are indicative of these rigidities (NOKUT, 2013c), even though parliamentary procedures allow for enhanced scrutiny of legislative instruments.

Moreover, the accreditation process was found to have an impact on the higher education landscape (NOKUT, 2013c). This is reflected, according to the evaluation report, in the increased number of new institutions in the sector and the university-colleges that acquired a university status through such process. Since the early 2000s there was a doubling in the number of universities (from 4 in 2003 to 8 in 2012), and more institutions have aspirations for university status (NOKUT, 2013b). In addition, new providers grew fast, as did the number of new advanced programmes in university-colleges, with more than 100 master's programmes and around 30 doctoral ones having been accredited by NOKUT in these institutions between 2003 and 2012 (NOKUT, 2013b).

Box 1.5. **Quality assurance mechanisms for tertiary education**

The Norwegian Agency for Quality Assurance in Education (NOKUT) was established under the Quality Reform in Higher education in 2002 and is funded fully by the state and regulated by the Ministry of Education and Research (Campbell et al., 2015). The agency is responsible for the accreditation (of institutions and study programmes) and quality assessment (audit of internal quality assurance systems) for higher education, as well as tertiary vocational education. It also assesses foreign higher education institutions. Higher education institutions in Norway also have a role in quality assurance as they are legally required to develop their own quality assurance systems – audited by NOKUT.

Accreditation is based on *ex ante* evaluation with unlimited periods of validity: once granted to the institution the accreditation lasts until explicitly revoked following an assessment (Campbell et al., 2015). There is a hierarchy in accreditation of study programmes. Universities have a self-accrediting status, that is they can decide freely on the study programmes to offer, at all levels, without the need to apply to NOKUT for accreditation, while accredited university-colleges have to apply for the accreditation for programmes at master's and doctoral levels (apart from specific cases) and specialised universities for programmes outside their field (again apart from specific cases). Non-accredited university-colleges must apply to NOKUT for all study programmes (Reichert and Ekholm, 2009). There is also an accreditation control process to protect against potential abuse of the granted powers. This is carried out by NOKUT through two external quality assurance processes: ad hoc revisions of an institution or programme that may result in a withdrawal of the previously granted accreditation, and cyclical audits of institutions' internal quality assurance systems, which are conducted every 6 years (the maximum). Institutions that fail to meet such criteria in terms of internal quality assurance lose their right (if themselves are accrediting organisations) to establish new study programmes, or to apply for accreditation of new study programmes (in the case of non-accredited institutions) (Campbell et al., 2015).

Changing requirements for accreditation and the establishment of advanced research programmes

The government plans to tighten the requirements for an institution to apply for accreditation as a specialised university and university and for creating programmes at master's and doctoral levels (Government of Norway, 2015a). Specifically, the plans include the following proposals:

- To qualify as a specialised university, an institution must document an enrolment of at least 15 students per doctoral programme over time. Institutions opting for a university status must document that at least two of their doctoral programmes have an average graduation of 5 candidates per year over a 3-year period; while those seeking to become a specialised university have to prove that the doctoral programme they offer has an average graduation of 5 candidates per year over a 3-year period.
- Accreditation to university status should continue to be subject to offering doctoral degree programmes in four subjects, but in addition such programmes should also cover the institution's main areas of academic activities and not only a part of them. In the case of application for accreditation as a specialised university, the applicant institution must prove that the doctoral programme covers its main academic areas.

The government plans to initiate a process, in consultation with NOKUT and the Research Council of Norway, to strengthen the requirements for the establishment of master's and doctoral programmes. Following the transitional period, the Ministry will consider whether institutions that offer four master's programmes may be able to self-accredit new master's programmes.

These developments raise questions about diversity. Taking stock of the dynamics in the Norwegian tertiary education sector in recent years, NOKUT (2013b) concludes that the profile of programmes broadened in each institution, increasing diversity within institutions, while institutional profiles became in many ways more similar, reducing diversity between institutions. As discussed above, much of the reduced inter-institutional

diversity is the result of "academic drift" arising from new universities and university-colleges moving into academic subject areas (and research areas) that have traditionally been the domain of the older universities (though there has also been some movement in the opposite direction with traditional universities branching into vocational courses). Large differences remain between the old universities, the new universities and the university-colleges (Bakken and Storm, 2012); the portfolios of the new universities continue to be dominated by traditional professional programmes, such as teaching and nursing and relatively fewer students in master's degree programmes (NOKUT, 2013b). However, if this academic drift continues in the future, institutional diversity needs to be closely monitored and safeguarded, especially regarding the educational opportunities with a more vocational orientation that might become more academically demanding (NOKUT, 2013b). Moreover, there are concerns that such drift, while providing academic development, can lead to the creation of too many small institutions offering master's and doctoral programmes, with a potential adverse impact on quality. The merger process (see above) may help reduce this risk.

The government plans to tighten the requirements for accreditation as a specialised university or a university, making the upgrading of the status dependent on required minimum enrolments and graduations in the institution's doctoral programme(s), and also on the extent that such programmes cover the key areas of the institution's academic activities (Box 1.5). Tighter criteria for establishing master's- and doctoral-level programmes are also envisaged, with the aim of increasing their scope and academic credentials (Government of Norway, 2015a). In addition, NOKUT's supervision of existing educational programmes will be strengthened.

The envisaged changes go in right direction. It is important that the accreditation process, giving the opportunity to institutions to apply for a higher status, is based on comprehensive and clear criteria of academic performance. Tighter criteria for the establishment of advanced research programmes will also help quality. A close monitoring of the impact of the new conditions is important.

Beyond the current proposals, harmonisation of quality control of doctoral programmes across institutions should also be on the agenda. The Research Council of Norway highlights, in this context, the lack of guidance on the length of such programmes, as well as of the monitoring of completion rates (RCN, 2011). To this end, the Council recommends the introduction of a national system to enforce and maintain the quality of doctoral degrees.

Also, enhancements in performance indicators are essential for better monitoring quality improvements in tertiary education. The requirement for the institutions to produce a yearly report and provide data on completions and other performance indicators is welcome in this regard. The authorities should expedite initiatives to improve information on learning outcomes. NOKUT is already conducting an annual national student survey and experiments with national exams in selected courses, as well as developing joint evaluations of research and educational activities in collaboration with the Research Council of Norway. Plans also include an Internet portal of quality indicators and a survey of employers' assessment of education quality (Government of Norway, 2015a).

While the moves currently underway to improve the quality of tertiary education certainly head in the right direction, this is a policy area requiring ongoing campaigns and initiatives. In light of this it is welcome that a White Paper on the quality of education is planned, with publication envisaged in spring 2017.

Recommendations on addressing the challenges in higher education

Ensure that the higher education system promotes efficiency and quality through successful mergers, effective governance, well-designed financial incentives to institutions for student progress and effective monitoring mechanisms. In particular:

- Continue to promote mergers among higher education institutions. Ensure partner institutions are carefully selected and provide adequate and sufficiently flexible financial support during the merging process.
- Monitor closely the impact of the mergers on efficacy and quality in higher education and research.
- As proposed by the government, encourage institutions to adopt a governance model that entails an external chairman and an appointed rector.
- Pursue plans to include the graduation rates in the formula for performance-based funding.
- Consider introducing differentiated rewards to institutions via the funding system for particular groups of students, such as immigrants, and for those courses that are linked closer to labour market needs.
- Develop multi-annual performance agreements between the government and each higher education institution.
- Terminate funding for weak study or research programmes.
- Tighten requirements for institutional accreditation and the establishment of master's- and doctoral-level programmes.
- Continue to improve data and dissemination via mechanisms such as the annual national student survey and the development of a portal of quality indicators.

As regards financial support for students:

- Further target incentives and financial support to students who complete their courses on time. In particular, consider an additional reward on the completion of degrees or linking the length of support to the standard duration of courses.
- Steer student choices, for instance, via loan discounts for subjects with high demand.

Bibiliography

Ahola, S., T. Hedmo, J.P. Thomsen and A. Vabø (2014), "Organisational Features of Higher Education; Denmark, Finland, Norway & Sweden", *NIFU Working Paper*, No. 14/2014, The Nordic Institute for Studies in Innovation, Research and Education (NIFU).

Amaral, A. (2009), "Recent Trends in European Higher Education", *Reforms and Consequences in Higher Education Systems: An International Symposium*, Center for National University Finance and Management (CNUFM), January, Tokyo.

Bakken, P. and I. Storm (2012), "Academic Drift and Diversity: Institutional Dynamics in Norwegian Higher Education", EAIR 34th Annual Forum in Stavanger, Norway, 5-8 September.

de Boer, H. and B. Jongbloed (2014), "Reflections on Performance Agreements in Higher Education", *Report for the Expert Group of the Ministry of Education and Research in Norway*, Center for Higher Education Policy Studies (CHEPS), Universiteit Twente.

Benner, M. and G. Öquist (2014), "Room for Increased Ambitions? Governing Breakthrough Research in Norway 1990-2013", Report to the Research Council of Norway.

Bleiklie, I., J. Enders, B. Lepori and C. Musselin (2011), "New Public Management, Network Governance and the University as a Changing Professional Organization", in Tom Christensen and Per Laegreid (eds.), *Ashgate Research Companion to New Public Management*, Aldershot:Ashgate, pp. 161-176.

Campbell, C., R. Middlehurst and W. Lawton (2015), "International Comparator Study to Inform the Quality Assessment Review in England, Wales and Northern Ireland", *Quality Assessment Review*, Report to Higher Education Funding Council for England, HEFCE, February.

Cappelen, Å., H. Gjefsen, M. Gjelsvik, I. Holm and N.M. Stølen (2013), "Forecasting Demand and Supply of Labour by Education", Rapport 48/2013, Statistics Norway.

Cheung, C., Y. Guillemette and S. Mobasher-Fard (2012), "Tertiary Education: Developing Skills for Innovation and Long-Term Growth in Canada", *OECD Economics Department Working Papers*, No. 991, OECD Publishing, Paris.

EC (European Commission/EACEA/Eurydice) (2015), *The European Higher Education Area in 2015: Bologna Process Implementation Report*, Luxembourg: Publications Office of the European Union.

Expert Group (2015), "Funding for Quality, Diversity and Collaboration – New Financing System for Universities and University Colleges", *Suggestions from Experts Appointed by the Ministry of Education on April 8, 2014*, Report Submission January 2015.

Finnegan, M. (2015), "Merging Irish Higher Educational Institutions: Rationale, Implementation and Impact", *Higher Education Teaching and Learning*, Vol. 5, March.

Goreham, H. (2011), "Mergers in Higher Education", Leadership Foundation for Higher Education, January.

Government of Norway (2015a), "Concentration for Quality – Structural Reform in the Higher Education Sector", *White Paper*, No. 18 (2014-15).

Government of Norway (2015b), "Investing in Maths and Science", Government.no (en/id4/).

Gunnes, T., L. Kirkebøen and M. Rønning (2011), "Financial Incentives and Study Duration in Higher Education", *Working Paper*, No. 6/11, Norwegian University of Science and Technology, Norway.

Gunnes, T., L. Kirkebøen and M. Rønning (2013), "Financial Incentives and Study Duration in Higher Education", *Labour Economics*, Vol. 25, Issue C, pp. 1-11.

Hamberg, S., M.L. Damen and P. Bakken (2015), "Personal Feedback and Advising in Norwegian Higher Education: Explaining Student Dissatisfaction", *Studiebarometeret: Rapport 5-2015*, Norwegian Agency for Quality Assurance in Education (NOKUT).

Harman, G. and K. Harman (2003), "Institutional Mergers in Higher Education: Lessons from International Experience", *Tertiary Education and Management*, Vol. 9, pp. 29-44.

Hedda (Higher Education Development Association) (2015), "Norway: Expert Group Suggests the Introduction of Contracts", January.

Hovdhaugen, E. (2009), "Transfer and Dropout: Different Forms of Student Departure in Norway", *Studies in Higher Education*, Vol. 34(1), pp. 1-17.

Hovdhaugen, E. (2011), "Do Structured Study Programmes Lead to Lower Rates of Dropout and Student Transfer from University?", *Irish Educational Studies*, Vol. 30(2), pp. 237-251.

Hovdhaugen, E. (2012), "Leaving Early: Individual, Institutional and System Perspectives on Why Norwegian Students Leave Their Higher Education Institution Before Degree Completion", PhD Dissertation, Sociology, Faculty of Social Science, University of Oslo.

Hovdhaugen, E. (2013), "Widening Participation in Norwegian Higher Education", Report Submitted to HEFCE and OFFA, Edge Hill University, October.

Kenna, R. and B. Berche (2011a), "Critical Mass and the Dependency of Research Quality on Group Size", *Scientometrics*, Vol. 86, pp. 527-540.

Kenna, R. and B. Berche (2011b), "Critical Masses for Academic Research Groups and Consequences for Higher Education Research Policy and Management", *Higher Education Management and Policy*, Vol. 23/3, pp. 9-29.

Kyvik, S. (2009), *The Dynamics of Change in Higher Education: Expansion and Contraction in an Organisational Field*, Springer, Dordrecht.

Kyvik, S. and B. Stensaker (2013), "Factors Affecting the Decision to Merge: The Case of Strategic Mergers in Norwegian Higher Education", *Tertiary Education and Management*, Vol. 19, No. 4, pp. 323-337.

Maassen, P., E. Moen and B. Stensaker (2011), "Reforming Higher Education in the Netherlands and Norway: The Role of the State and National Modes of Governance", *Policy Studies*, Vol. 32, No. 5, pp. 479-495, September.

Melin, G., T. Fridholm and E. Ärenman (2013), "Experiences of University Mergers in Sweden and Denmark", *Final Report*, Technopolis Group, August.

Myklebust, J.P. (2015), "Universities and Colleges Face Wholesale Reforms", *University World News*, Issue No. 361, March.

NMER (The Norwegian Ministry of Education and Research) (2005), *OECD Thematic Review of Tertiary Education*, Country Background Report for Norway, January, Government of Norway.

NMER (2007), "Education – From Kindergarten to Adult Education", Government of Norway.

NMER (2014), "Structure of Higher Education", Government.no (en/id4/), Government of Norway.

NOKUT (Norwegian Agency for Quality Assurance in Education) (2013a), "General Information about the Education in Norway".

NOKUT (2013b), "Institutional Dynamics in Norwegian Tertiary Education", June.

NOKUT (2013c), "Review of NOKUT – The Norwegian Agency for Quality Assurance in Education Report of the ENQA Panel", May.

NOKUT (2015), "2014 Studiebarometeret", Norwegian Agency for Quality Assurance in Education.

OECD (2003), *Education Policy Analysis*, OECD Publishing, Paris.

OECD (2008a), *OECD Economic Surveys: Norway 2008*, OECD Publishing, Paris.

OECD (2008b), *OECD Reviews of Innovation Policy: Norway 2008*, OECD Publishing, Paris.

OECD (2009a), *OECD Reviews of Tertiary Education: Norway 2009*, OECD Publishing, Paris.

OECD (2009b), "Learning our Lesson: Review of Quality Teaching in Higher Education", *Institutional Management in Higher Education*, OECD Publishing, Paris.

OECD (2010), *OECD Economic Surveys: Norway 2010*, OECD Publishing, Paris.

OECD (2011), *OECD Economic Surveys: Slovenia 2011*, OECD Publishing, Paris.

OECD (2012a), *Post-Secondary Vocational Education and Training: Pathways and Partnerships*, Higher Education in Regional and City Development, OECD Publishing, Paris.

OECD (2012b), "Education Indicators in Focus", Issue 2012/02, February, OECD.

OECD (2014a), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris.

OECD (2014b), *OECD Economic Surveys: Norway 2014*, OECD Publishing, Paris.

OECD (2014c), *OECD Skills Strategy Diagnostic Report: Norway*, OECD Publishing, Paris.

OECD (2015), *OECD Science, Technology and Industry Scoreboard 2015: Innovation for Growth and Society*, OECD Publishing, Paris.

Opheim, V. (2011), "Changing the System of Student Support in Norway: Intended and Unintended Effects on Students", *Scandinavian Journal of Educational Research*, Vol. 55:1, pp. 39-59.

Orr, D., C. Gwosc and N. Netz (2011), "Social and Economic Conditions of Student Life in Europe, Synopsis of Indicators, Final Report. Eurostudent IV 2008-11", Bielefeld: W. Bertelsmann Verlag.

PC (Productivity Commission) (2015), "Productivity – Underpinning Growth and Welfare", *Official Norwegian Reports*, NOU 2015:1.

Pruvot, E.B., T. Estermann and P. Manson (2015), "Define Thematic Report: University Mergers in Europe", Define Project, European University Association.

RCN (Research Council Norway) (2011), "Evaluation of Biology, Medicine and Health Research in Norway", Research Council Norway, Oslo.

Reichert, S. and L. Ekholm (2009), "Institutional Diversity in Norwegian Higher Education", in *Institutional Diversity in European Higher Education: Tensions and Challenges and Institutional Leaders*, S. Reichert (ed.), European University Association.

Santiago, P., K. Tremblay, E. Basri and E. Arnal (2008), *Tertiary Education for the Knowledge Society*, OECD Publishing, Paris.

Skodvin, O.J. (1999), "Mergers in Higher Education – Success or Failure?", *Tertiary Education and Management*, Vol. 5, Issue 1, pp. 65-80.

Skodvin, O.J. (2014), "Merger as an Instrument to Achieve Quality in Higher Education – Rhetoric or Reality?", Paper Presented in Track 1 at the EAIR 36th Annual Forum in Essen, Germany, August.

SSB (Statistics Norway) (2013), "Forecasting Demand and Supply of Labour by Education", *Reports 42/2013*.

SSB (2014) "Projections of Population and Labour Force by Education Based on Alternative Assumptions About Immigration", *Reports 2014/31* (in Norwegian).

SSB (2015a), "Facts About Education in Norway 2015 – Key figures 2013".

SSB (2015b), "Throughput of Students in Tertiary Education, 2013/14", June.

Stensaker (2015), "Troublesome Institutional Autonomy: The Governance and Distribution of Authority in Norwegian Higher Education", in *International Trends in University Governance: Autonomy, Self-government and the Distribution of Authority*, Shattock, M. (ed.), pp. 34-48.

Tremblay, K., D. Lalancette and D. Roseveare (2012), "Assessment of Higher Education Learning Outcomes", *Feasibility Study Report, Volume 1 – Design and Implementation*, OECD Publishing, Paris.

US Department of Education (2014), "Obama Administration Announces Final Rules to Protect Students from Poor-Performing Career College Programs", October.

Vabø, A. and A. Kårstein (2014), "Better Disciplines: A Literature Review", *NIFU Working Paper*, No. 12 , The Nordic Institute for Studies in Innovation, Research and Education (NIFU), Oslo (in Norwegian).

Chapter 2

Policy challenges for agriculture and rural areas

Norwegian policy gives high priority to supporting rural communities, with support for agriculture receiving particular attention. It is broadly successful in terms of maintaining rural communities, and urban-rural gaps in a range of well-being indicators are comparatively narrow. However, the cost-efficiency and sustainability of the policy mechanisms are questionable. Agriculture and rural policy in Norway needs to focus more strongly on economic sustainability alongside social sustainability. Agricultural support remains overly concentrated on maintaining the status quo and has seen little reform compared with policies elsewhere in the OECD. In contrast, the fishing industry has reformed much further towards economic sustainability, aquaculture has seen considerable success and there is potential for more rural tourism. Supporting rural communities also requires attention to the quality of public services in rural areas, and this report draws particular attention to inefficiencies arising from small-scale municipalities, and supports efforts to encourage mergers towards larger units, paving the way for greater operational leeway for municipal government.

Ensuring high and sustainable levels of well-being in rural areas is increasingly challenging. It is important that policymakers clearly understand how far to go in supporting agricultural production and other "traditional" rural activities, how best to encourage economic diversification into other areas, and how best to ensure good quality public services in rural communities. These issues resonate strongly in Norway as a high priority long been put on supporting the country's rural communities, notably through agriculture support, with a view to countering depopulation and economic decline. Although much of the population lives in urban and suburban areas, there is considerable interest in rural areas as many households have links with through family connections and through second homes used for weekend breaks and holidays. Thus, the small shares of output and employment now attributable to the agricultural, forestry and fishing sector (around 2% of GDP and a little more in terms of employment, Figure 2.1, Panels A and B) somewhat belie the significance of the rural sector as a whole. Norway's comfortable fiscal position, thanks to oil wealth, gives it more choice on how to go about supporting agriculture and the rural sector than is the case in many countries. However, the revenues brought by oil wealth can also mean slow progress in politically difficult reforms, and Norwegian agricultural policy is a prime example.

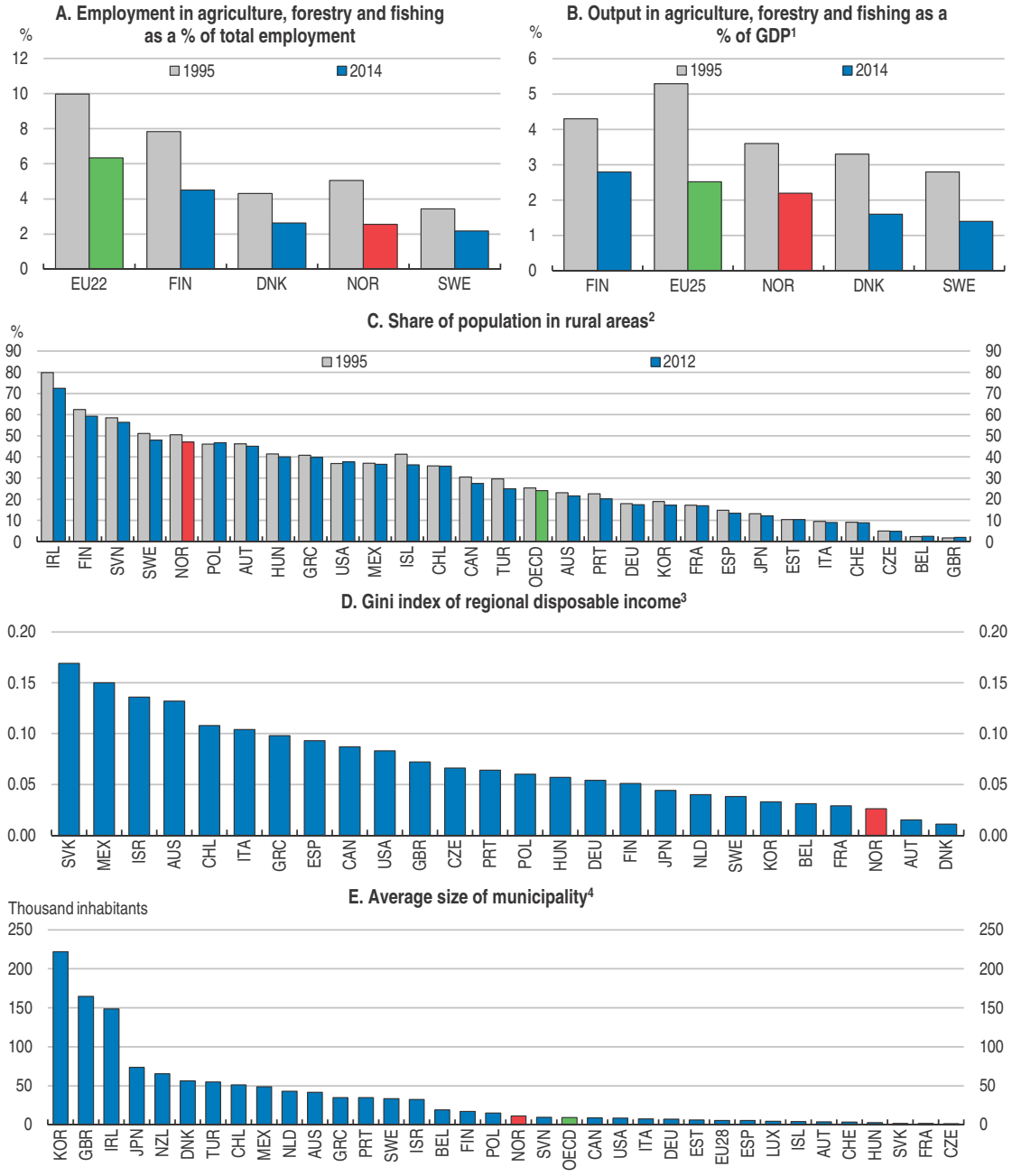
Policy efficiency is the central question

Norway is geographically large in relation to its population and has diverse habitats, many of which are rugged with harsh climates that present significant challenges for everyday life and economic activity, even with modern technology and conveniences. Only about 3% of Norway's land area is taken up by arable farming, much of it in low-lying areas close to the main urban centres, while dairy farming is an important agricultural activity throughout the country. Many small coastal communities are traditionally reliant on fishing. Norway's northernmost regions are especially unique, with considerable tracts of land within the arctic circle and a sizeable nomadic *Saami* population.

The declining economic role of farming and fishing in rural communities has to a varying extent been offset by new activities. Some coastal locations have been boosted by incoming business relating to exploration and development of oil and gas fields or aquaculture development. While such boons provide a welcome fillip to local economies, some are of limited duration and scope, for instance when the only substantial demand for local labour and services occurs during the installation-construction phase of a project. Some rural communities are successfully tapping into opportunities in tourism or other areas of natural advantage, such as spin-off activities related to local hydroelectric power.

In broad terms the strong policy priority put on supporting rural communities in Norway appears to have had some beneficial effect. Outcomes in terms of maintaining rural communities appear reasonably good. According to OECD data, about 45% of people live in "predominantly rural" regions, compared to an OECD average of around 25% (Figure 2.1, Panel C), a rough indicator of some degree of success in countering rural

Figure 2.1. **Key features of the rural economy**



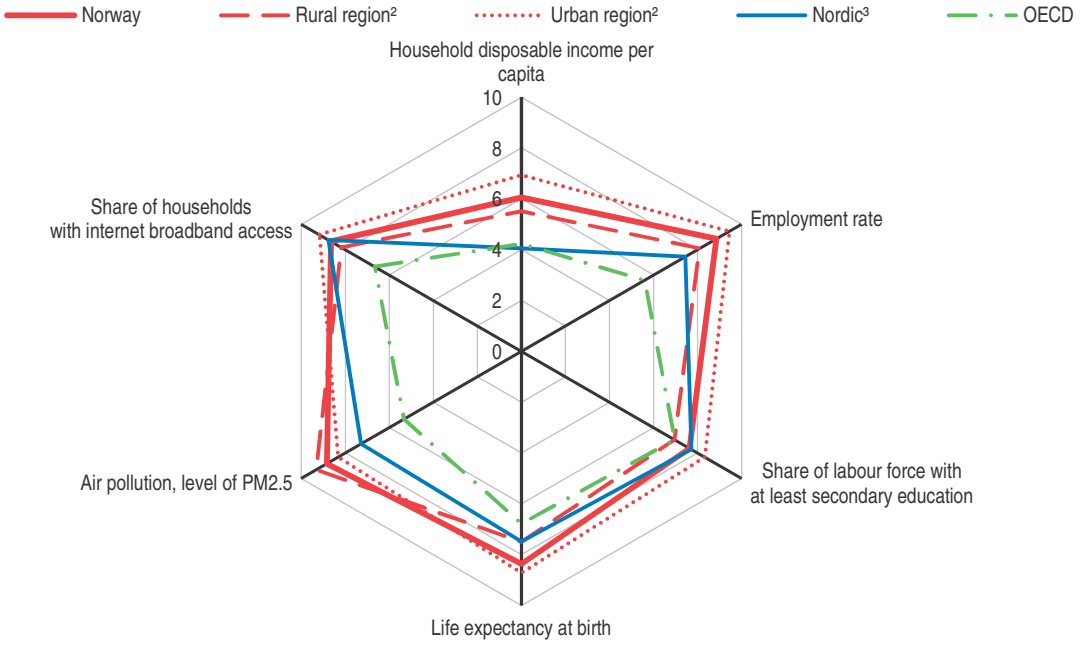
1. GDP data for Norway refer to mainland only.
2. A rural ("predominantly rural") region is defined as one in which at least 50% of the population live in rural communities, the latter being classified, *inter alia*, on the basis of population density, see OECD, *Regions at a Glance 2013*, p. 154. First available year: 1996 for Australia and Canada. Last available year: 2010 for Mexico and 2011 for Australia.
3. The Gini index assesses inequality by measuring how far the distribution of income among households deviates from a perfectly equal distribution. A Gini index of zero represents perfect equality and 1, maximum inequality. Calculation based on average regional household disposable income per capita. Regions are classified at Territorial Level 2 (TL2), which divides the OECD economy into 362 large regions. 2011-14 data.
4. Korea, Portugal and the United Kingdom have a sub-municipal level. 2014-15 data.

Source: Eurostat (2015), *Annual National Accounts* (database); OECD (2015), "Regional demography", *OECD Regional Statistics* (database); Author's calculations based on OECD (2015), "Regional economy", *OECD Regional Statistics* (database); OECD (2015), "Sub-national governments in OECD countries: Key data" (brochure), OECD, Paris, *www.oecd.org/regional/regional-policy*.

StatLink http://dx.doi.org/10.1787/888933315068

depopulation. Comparatively small regional differences in average disposable income compared with other countries (Figure 2.1, Panel D) suggest, furthermore, that gaps between rural and urban living standards may be comparatively narrow in Norway. Furthermore, disparities are not large in a range of other well-being indicators. For instance, both urban and rural areas score at, or above, the OECD average in education, life expectancy and Internet access, and gaps between the urban and rural scores are all fairly small (Figure 2.2).

Figure 2.2. **Well-being differences between urban and rural areas**[1]



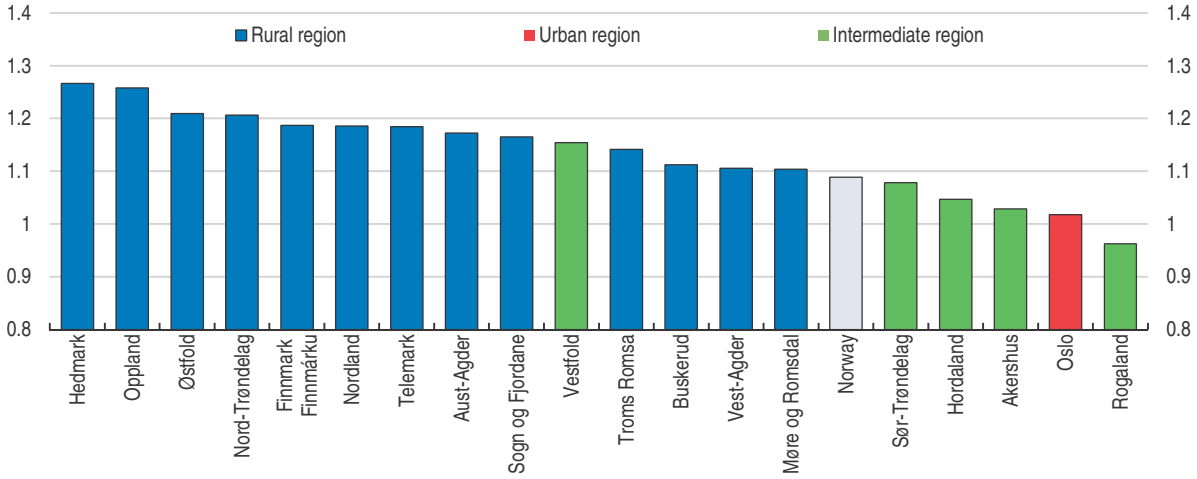
1. Indicators are normalised by re-scaling to be from 0 (worst) to 10 (best) among OECD countries. 2013 data.
2. Rural (or urban) region is defined as one in which at least 50% of the population (or less than 15% of population) live in rural communities, the latter being classified, *inter alia*, on the basis of population density, see OECD, *Regions at a Glance 2013*, p. 154.
3. Nordic is a simple average of Denmark, Finland and Sweden.

Source: OECD (2015), "Regional well-being", *OECD Regional Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933315077

One central question is whether these outcomes are being achieved efficiently and sustainably. A broad illustration of the magnitude of transfers between the regions is seen in the ratio of household disposable income to the wage bill across Norway's counties (Figure 2.3). In Oslo the ratio is about 1, while in the predominantly rural area of Hedmark it is nearly 1.3, i.e. overall, the county's disposable income is 30% greater than its income from earnings. In part these differences between regions reflect agricultural-sector support feeding into household disposable incomes (directly and indirectly). Agriculture accounts for about two-thirds of state budgetary aid, most of in the form of tax expenditure and support for farming (Productivity Commission, 2015). State aid also finds its way to rural areas through other channels, for instance via a system of regionally differentiated rates of employer social-security contributions. Of course a host of other factors influence the ratio of disposable income to wage income, such as regional differences in welfare pay outs reflecting differences in age structure and family composition.

Figure 2.3. **Ratio of disposable income to wages and salaries by region**



Note: "Rural" (or "urban") region is defined as one in which at least 50% of the population (or less than 15% of population) live in rural communities, the latter being classified, *inter alia*, on the basis of population density, see OECD, *Regions at a Glance 2013*, p. 154. 2013 data.
Source: Statistics Norway, Regional Accounts Statistics.

StatLink http://dx.doi.org/10.1787/888933315084

Subsequent sections will reveal that shortfalls in the efficiency of policies related to rural areas reflect a heavy focus on preserving the *status quo*. This entails substantial support for activities and approaches to production as many businesses are far from economic viability. Shifting away from this approach towards one concentrated on encouraging economically sustainable activities for the longer term is important, not only for rural communities but also for the wider public. Unwinding permanent support not only saves on public spending but means reduced supply-chain distortions that impose hidden costs on households by distorting prices and the allocation of resources in the economy.

Efficiency in terms of public services is an important issue, especially given the small scale of Norwegian local government. In international comparison, the average size of Norwegian municipalities is middle ranking (Figure 2.1, Panel E). Yet the range is extremely wide. For instance Oslo, with a population of around 600 000, is a single municipality. In contrast, there are nearly 130 municipalities with populations of less than 2 500. The small municipalities have practically the same roles and responsibilities as the large ones, which creates challenges in administration and public-service delivery.

The remainder of this chapter first discusses agricultural support policies. It then takes a look at developments and prospects in fishing, aquaculture and tourism, and then takes a brief look at regional policy mechanisms. A final section considers how sub-national government can be made more effective and efficient.

Reforming agricultural support

Echoing the words of Norway's Productivity Commission, the country's agricultural policy does not pay enough attention to balancing the costs and distortions of support (*inter alia*, direct subsidy, market-price support, and tax concessions) against the claimed benefits of support (generally in the form of public goods such as food security cultural landscapes, biodiversity and sustaining rural economies) (Productivity Commission, 2015, Chapter 1). The support system remains geared, essentially, around preserving the

status quo which means protecting and supporting largely uneconomic production. Those in favour of retaining the current support system often advance rather unconvincing arguments that continuous and indefinite subsidy is necessary for reasons of "self-sufficiency" or as a contribution to global food supply.

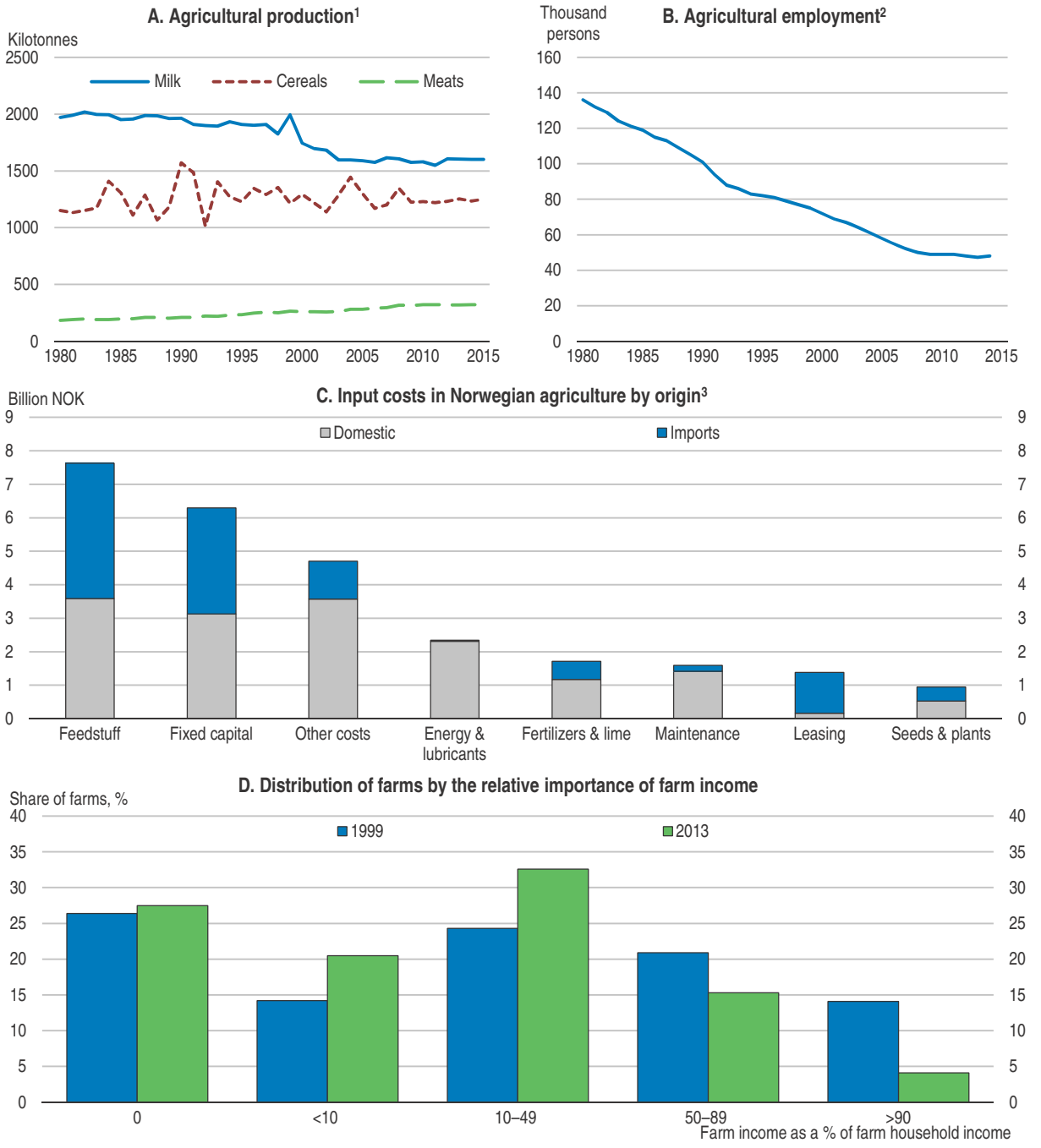
Policy also needs to more fully recognise that, as in other economies, change is underway in the agricultural sector, despite the efforts from some quarters to prevent it. As elsewhere, technological progress has substantially reduced labour requirements in agriculture (Figure 2.4, Panels A and B). Technological progress has also been associated with increasing use of imported inputs to production, such as animal feed and capital equipment. The import content of the inputs to agricultural production is estimated to be a little over 40%, and a lot higher for some categories of input (Figure 2.4, Panel C). This has implications for debate on "food security" (discussed further below) and for the net benefits to the domestic economy of agricultural-sector subsidies. Furthermore, on many Norwegian farms, income from food production represents only part of the revenue stream and this diversification continues. This is illustrated in Figure 2.4, Panel D which, for instance, shows that only in around 5% of farming households does income from farming itself account for more than 90% of revenue, in a large majority of farming households, farming income accounts for less than 50% of revenue. Furthermore, the share of farm households with agriculture as the predominant income source has been diminishing over time. Income from forestry activity is one of the most common forms of non-farming income. In addition, an increasing number of spouses are working outside the farm.

Farmers are supported by direct subsidy, price support and tax breaks…

Much support for Norway's rural areas comes via direct and indirect assistance for farmers. Direct support comprises around 100 individual mechanisms, the principal types of support being: output-based support, transport subsidies, acreage-based payments and headage payments (see Table 2.1). The core support mechanisms are augmented by a host of other programmes that, for example, help cover labour costs or compensate farmers in the event of natural disasters and losses due to predators. Support for investment expenses comes mainly through schemes run by a special fund (the Agricultural Development Fund). Agri-environmental incentives and programmes are run by the country's 18 regions (guided by the National Environmental Programme). Also, farmers can be eligible for schemes operating under rural development programmes. Finally, farmers also benefit from a special tax relief.

An annual negotiation between the government and representatives of the farmers sets key parameters, such as the target-prices, and a number of the budgets for direct financial support. The negotiation provides the farming lobby with a powerful platform to defend their interests, and is centred on the implications of support for net farm incomes. To this end, the negotiation makes extensive use of microsimulations of farm finances. The microsimulations model the finances of around 30 representative farms using inputs from actual farm accounts and are run by the Norwegian Institute of Bioeconomy Research. In the negotiation, proposals for parameter changes are programmed into the system and the impact on farm incomes is assessed. The negotiations held in 2014 (establishing the budget for 2015) failed to reach agreement and, in accordance with procedural rules, government proposals for budgets and parametric adjustments were instead voted on by parliament.

Figure 2.4. **Trends in agriculture**



1. Cereals: wheat and coarse grains. Meats: beef and veal (carcass weight equivalent, c.w.e.), pigmeat (c.w.e.), poultry meat (ready to cook), and sheepmeat (c.w.e.).
2. Employments in crop and animal production, hunting and related service activities. 2014 and 2015 data are estimated.
3. 2014 data.

Source: FAO/OECD (2015), "OECD-FAO Agricultural Outlook (Edition 2015)", *OECD Agriculture Statistics* (database); The Norwegian budget committee for agriculture (2014), "Resultatkontroll for gjennomføring av landbrukspolitkken", Table 7.15; Eurostat (2015), *Annual National Accounts* (database); Norwegian Institute of Bioeconomy Research.

StatLink http://dx.doi.org/10.1787/888933315094

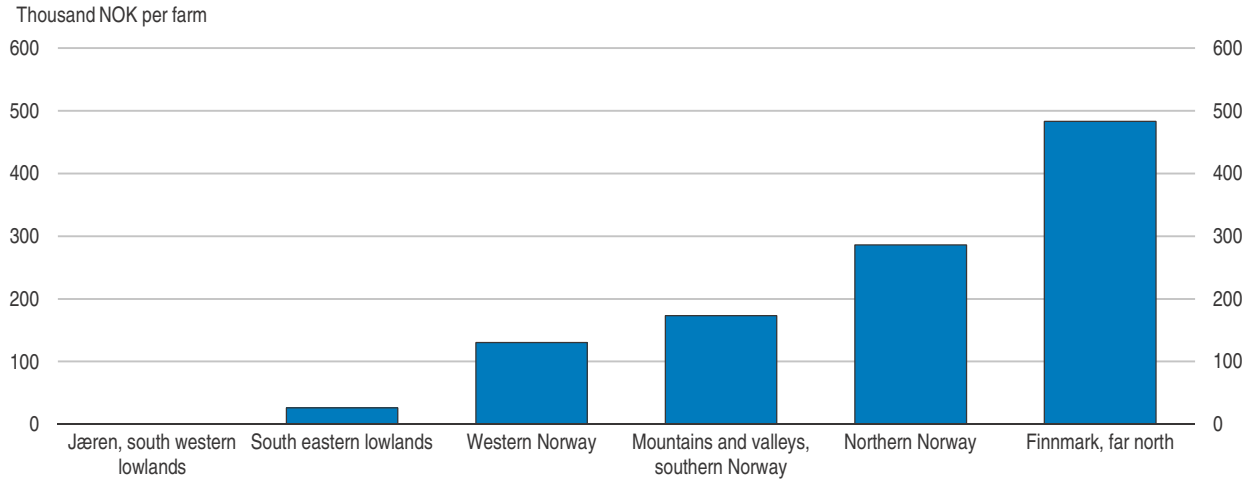
Table 2.1. **Agricultural support in Norway: Budgetary support, including tax relief**

Type of support	Selected detail
Output-based payments for certain meats, poultry, wool, fruit and vegetables, cereals, eggs and certain processed products	Payments to farmers (in some cases processors) based on the volume of output. Most payments have a regional dimension. *Example:* the payment for meat comprises a nationwide ("base") payment per tonne of meat, a regional deficiency payment and an extra regional payment for meat producers in northern Norway.
Transport subsidies	Various schemes supporting transport of meats, eggs, grains and feed
Acreage-based payments	*Cultural Landscape Support.* A lump-sum payment per hectare paid on all agricultural land. *Acreage Support Programme.* Payments based on land area under current use. Products (or activities) covered include: coarse fodder, grains, potato and mountain farming. *Support for grazing animals.* Per animal payments differentiated by animal and region.
Headage payments for livestock	*Headage payments* for bovine animals, pigs, goats, hens, horses, rabbits and sheep. Payment structures are degressive (i.e. payment per animal decreases with the number of animals).
Dairy-industry payment schemes	*Quota-limited price support.* Comprises a structural income support and a regional payment per litre of milk for a limited output. A "*structural payment*" based on animal numbers. *Mountain dairy farming scheme.* A fixed per-farm payment.
Financial assistance with labour input	*Vacation and Replacement Scheme* and *Assistance in the case of illness.* Reimbursements for hiring replacement labour during vacation or to cover for employee illness.
Other national payment schemes	Schemes include: organic farming support, natural disaster compensation, compensation programmes for losses due to predators and other losses, distribution subsidies to horticultural sector.
Agricultural Development Fund	Provides a wide range of support, generally for investment-type activities. For instance the fund provides interest-cost assistance and supports investment in areas such as "traditional" farming, energy saving and landscape development.
Regional environmental programme	Separate programmes are run by the 18 counties following a decentralisation of agri-environmental policy in 2005. Measures aim to provide additional support to guard the "cultural" landscape (biodiversity, cultural heritage, etc.) and to reduce pollution.
Income-tax deduction	Positive income balances are not taxed up to a maximum tax saving of NOK 44 900 (i.e. around EUR 4 900 at an exchange rate of 9.2) per farmer.

A substantial amount of regional support is built into the direct financial support for farmers, with payments often gradated according to region. In effect this represents a substantial component of Norway's regional policy (along with mechanisms such as regionally differentiated employer contributions, see below). For instance, Figure 2.5 shows the results of microsimulations of the total value of the regional payments provided by subsidy mechanisms in the case of 30-cow dairy farm. In the south-west of the county there are no regional payments, while in the far north of the country they amount to nearly NOK 450 000 per year (roughly equivalent to the average salary in Norway and around EUR 49 000 at an exchange rate of 9.2).

In addition to direct financial support, there are custom's tariffs on many raw ingredients and processed food products, supporting farmers indirectly by raising the price of imports. For instance, there is a hefty import tariff on importing livestock, equivalent to around EUR 750 per animal and low-fat milk imports are subject to a 443% tariff (Table 2.2). "Most favoured nation" (MFN) tariff rates are comparatively high (Figure 2.6, Panel A). To be sure, tariffs may to some extent get absorbed by margin-narrowing in the supply chain. Also, for non-sensitive products, the applied tariffs are low or zero and in free-trade agreements Norway has bound up to 50% of products duty free. Nevertheless, the extensive tariffs certainly push up the retail price of food. Retail food prices in Norway are some 80% greater than the OECD average, according to price data collected for the calculation of the OECD's purchasing power parities (Figure 2.6, Panel B), and there is little doubt that the tariffs are a major contributor (comparatively high supply-chain labour costs probably also play a role).

Figure 2.5. **Regional annual payments for a 30-cow dairy farm**



Note: The figures are a calculation of the total value of the various regional dimensions included in many of Norway's support payments to farmers based on microsimulations of a 30-cow dairy farm located in differed regions of the country, using rates of support as of 2015.
Source: Norwegian Ministry of Agriculture and Food.

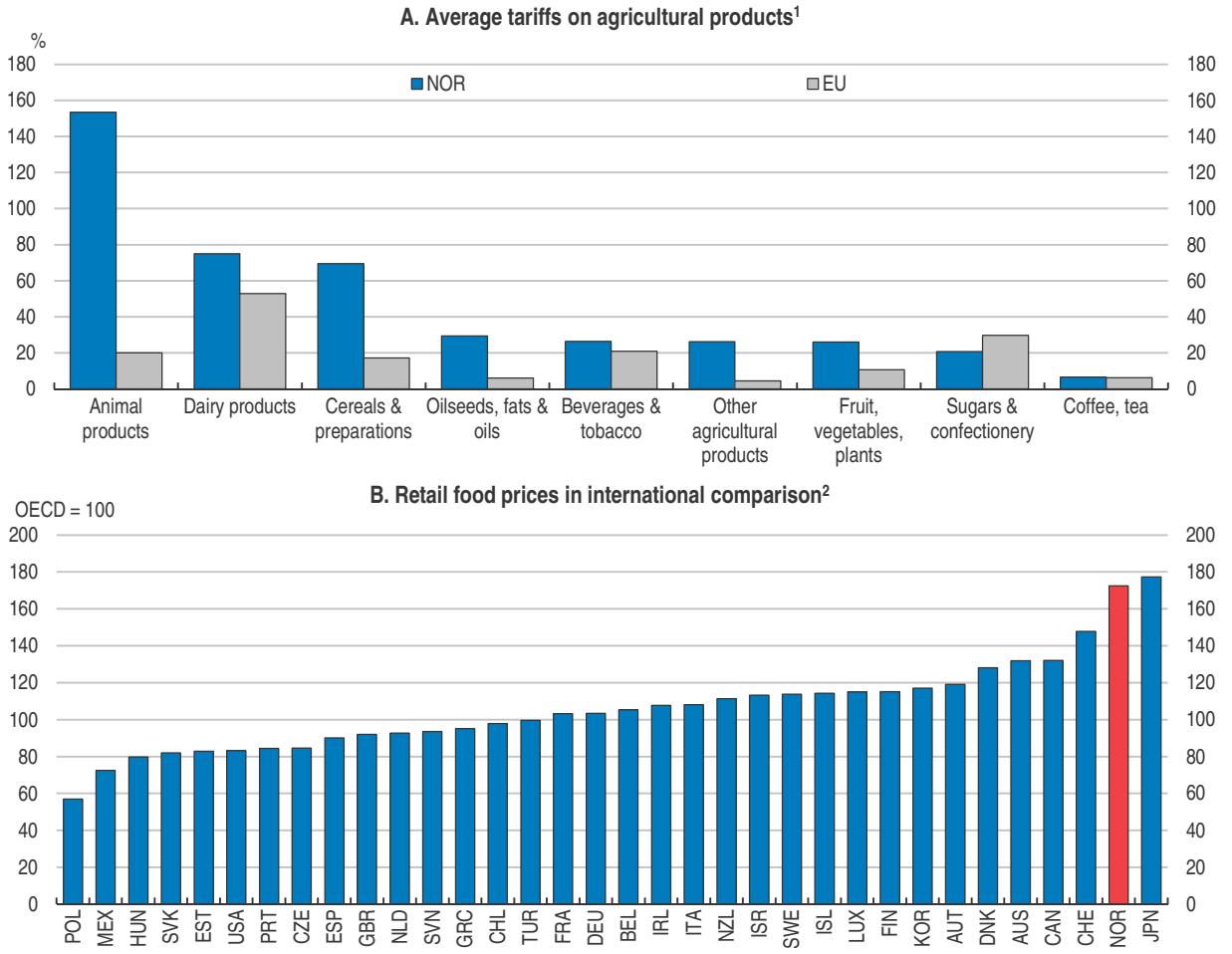
StatLink http://dx.doi.org/10.1787/888933315105

Table 2.2. **Agricultural support: Non-budgetary forms of support**

Type of support	Selected detail
Production quotas	Farm-level production limits aimed at protecting small-scale, high-cost production
"Target price" system	As part of the annual negotiation between the farming unions and government, prices for which the agricultural co-operatives purchase products from the farmers are set. The system largely aims to give a price possibility for farmers, however it can "protect" processers (and consumers) as there are mechanisms to bring prices down if they rise above the negotiated price levels
Indirect price support via custom's tariffs	Hundreds of volume-based and value-based tariffs apply to livestock, raw ingredients and processed food products. Examples of statutory tariffs applying outside trade agreements for 2014[1]: • Livestock: e.g. NOK 7500 (i.e. around EUR 815 at an exchange rate of 9.2) per head of cattle (pure breeding animal) (Code 01.02.2100 in the *Harmonised System* maintained by the World Customs Organisation). • Meat and related: e.g. NOK 32.28 (i.e. around EUR 3.50) per kg of bovine meat (carcasses) (Code 02.01.1000). • Dairy produce: e.g. 443% tariff on milk (fat content less than 1%) (Code 04.01.1000). • Arable and related: e.g. NOK 2.13 (i.e. around EUR 0.23 per kg on durum wheat (Code 10.01.1100).
Education and research	A range of activities are at least partially publicly funded, including agricultural research stations, university life sciences departments, veterinary school.
Inspection and control services, institutional infrastructure	Includes, for instance support for organisations, operation of land allocation court.
Marketing support	For instance there is a market promotion fund which is used to promote organic produce.
Land-use and land transfer legislation favouring the status quo	*Concession Law:* requires owners of certain properties to obtain a "concession" from municipalities. The law, in effect, limits corporate ownership of farms. In addition it regulates/limits property prices. *Allodial Rights Act:* provides family members legal rights to claim ownership of a property; under certain circumstances even after it has been sold to a third party. *Obligation to Farm:* Land designated as home pasture (*innmarksbeite*) must be farmed, with municipal authorities having rights to order that the land is leased out in case of non-compliance. *Obligation to Reside:* Various types of property (including allodial properties over a certain size) require owners to live in the property for a minimum period.

Source: Norwegian Government. Norwegian Customs Tariffs, 2014. See Norwegian Agriculture Agency website for further details (*www.slf.dep.no/en/property/the-norwegian-concession-act*).

Figure 2.6. **Norway's heavy tariffs on agricultural products partly contribute to high food prices**



1. Average Most-Favoured Nation (MFN) tariffs, which are the standard rates charged on imports from all WTO members, excluding preferential rates, or lower rates charged within quotas. 2014 data.
2. 2014 data are calculated based on the 2011 PPP benchmark results and food consumer prices data for 2011-14.

Source: WTO (2014), "World Trade Profiles 2014"; Author's calculations based on OECD (2015), "PPP benchmark results 2011 (Edition 2013)", *OECD National Accounts Statistics* (database) and OECD (2015), "Prices: Consumer prices", *Main Economic Indicators* (database).

StatLink http://dx.doi.org/10.1787/888933315115

Among the various other forms of indirect financial support (Table 2.2), there is a complex set of tax concessions that provide fairly substantial implicit financial assistance to farmers. A special personal income-tax deduction for farmers is the largest single item of support, worth approximately NOK 1 billion per year, which averages out to about NOK 22 000 per farm (i.e. about EUR 2 500), given that there are around 45 000 producers. Other tax benefits include provisions allowing farmers to include depreciation of capital equipment as a tax deduction even if the equipment was bought with subsidies.

Agricultural producers in Norway are exempt from greenhouse-gas emission taxes and the cap-and-trade system. Practical challenges in measuring emissions relating to agricultural activity (the biggest issue is methane released by cows) mean that very little progress has been made in imposing economic instruments in the vast majority of countries. While pioneering efforts would certainly be welcome, Norway is certainly not out of step with policy in other countries on this front.

… concessions and special rules in legislation…

Elements of land-transfer and land-use legislation are purposefully designed to support the *status quo* in farming communities, by promoting agricultural activity and the preservation of family farms. Corporate ownership of farms is limited by legislation requiring owners to apply for a concession, there are inheritance laws giving descendants rights to claim property from third parties and legislation requiring that certain land is farmed and requiring owners to remain resident in their properties for a minimum period (Table 2.2). Such explicit restrictions on land and farm ownership are not common. A similar situation exists in Japan where, for instance, farmland can only be purchased with a commitment to cultivate the land (OECD 2013a). On other legislative fronts, the agriculture and fishing sectors are exempt from Norway's main legislation on competition (the Competition Act).

… and the market power of agricultural co-operatives

Agricultural co-operatives are an important part of the supply chain in some sectors, adding another dimension of support to farmers. Thirteen agricultural co-operatives operate under an umbrella organisation (the Agricultural Co-operatives of Norway, *Landbrukssamvirket*). The co-operatives include food processing operations, the largest of which is the dairy co-operative, *Tine*, which has a membership of around 15 000 farmers and employs around 5 500. *Tine* purchases and processes a large proportion of Norwegian milk production and has diversified into a range of other activities. The power of the co-operatives is formalised by the market regulation system, in particular through a law (*Omsetningsloven*) that gives the three large milk, meat/eggs and grain co-operatives a special role in the market regulation. Related to this, there is the exemption of the agricultural sector from competition policy. Potentially, co-operatives can monopolise segments of the market, pushing up the final price to consumers, but this is countered by the mechanisms that bring prices down if they rise above agreed levels. Co-operatives may add to farming-lobby powers by providing a powerful voice in favour of limiting competition.

The role of the co-operatives illustrates a point highlighted by Norway's Productivity Commission (Productivity Commission, 2015), that agricultural policy not only impacts primary production, but also distorts efficiency and competition in the supply chain as a whole. While the costs of the agricultural policy related to the resource allocation in the primary sector are in general well known, distortions in the supply chain as a whole (including food industry and the retail sector) are rather less well documented, and less emphasised by policy makers.

Overall, producer support in agriculture is very substantial and distorting

Norway's combination of direct payments and indirect support adds up to one of the most generous subsidy systems for farmers in developed countries. According to the OECD's producer-support estimate (see Box 2.1), Norway ranks alongside Iceland, Japan, Korea and Switzerland, which are also renowned for having long provided substantial support to their farming sectors (Figure 2.7). Norway's percentage producer-support score is nearly 60% which implies that, on average, the value of support roughly more than matches the value of agricultural production valued at world market prices.

Box 2.1. **The OECD's approach to estimating support for the agricultural sector**

The OECD's approach to estimating support for the agricultural sector takes into account not only direct payments to farmers from support schemes, but also forms of indirect support, such as customs tariffs and general support (e.g. publically funded agricultural research) (see Table 2.3).

- Derivation of the value of direct payments and general support is relatively straightforward, the data are usually provided by the national authorities.
- Indirect support is generally reflected in estimates of "market price support" which are a sub-category of "Support Based on Commodity Outputs" (see Table 2.3). Market price support calculations are based on the gap between the produce price at the farm gate (based on estimates of the value and volume of production provided by national authorities) and an international reference price. For example, the reference prices for wheat and barley are market data for EU standard product prices in France's Rouen market. Use of these reference prices in the calculations means that year-to-year fluctuation in the money value of agricultural support can reflect changes in global market conditions, rather than policy actions. For instance a sharp rise in global commodity prices can result in a downward spike in the relative value of market price support, especially if customs tariffs are predominantly volume rather than value based.

Among the various indicators derived from the support estimates, the producer support estimates (PSE) is the most widely referenced. It measures the value of transfers from consumers and taxpayers to individual agricultural producers. The percentage PSE ("% PSE") is the ratio of transfers to as share of gross farm receipts (*including support*, which means, for instance that a 50% PSE means that support equals that of net farm receipts, valued at world market prices).

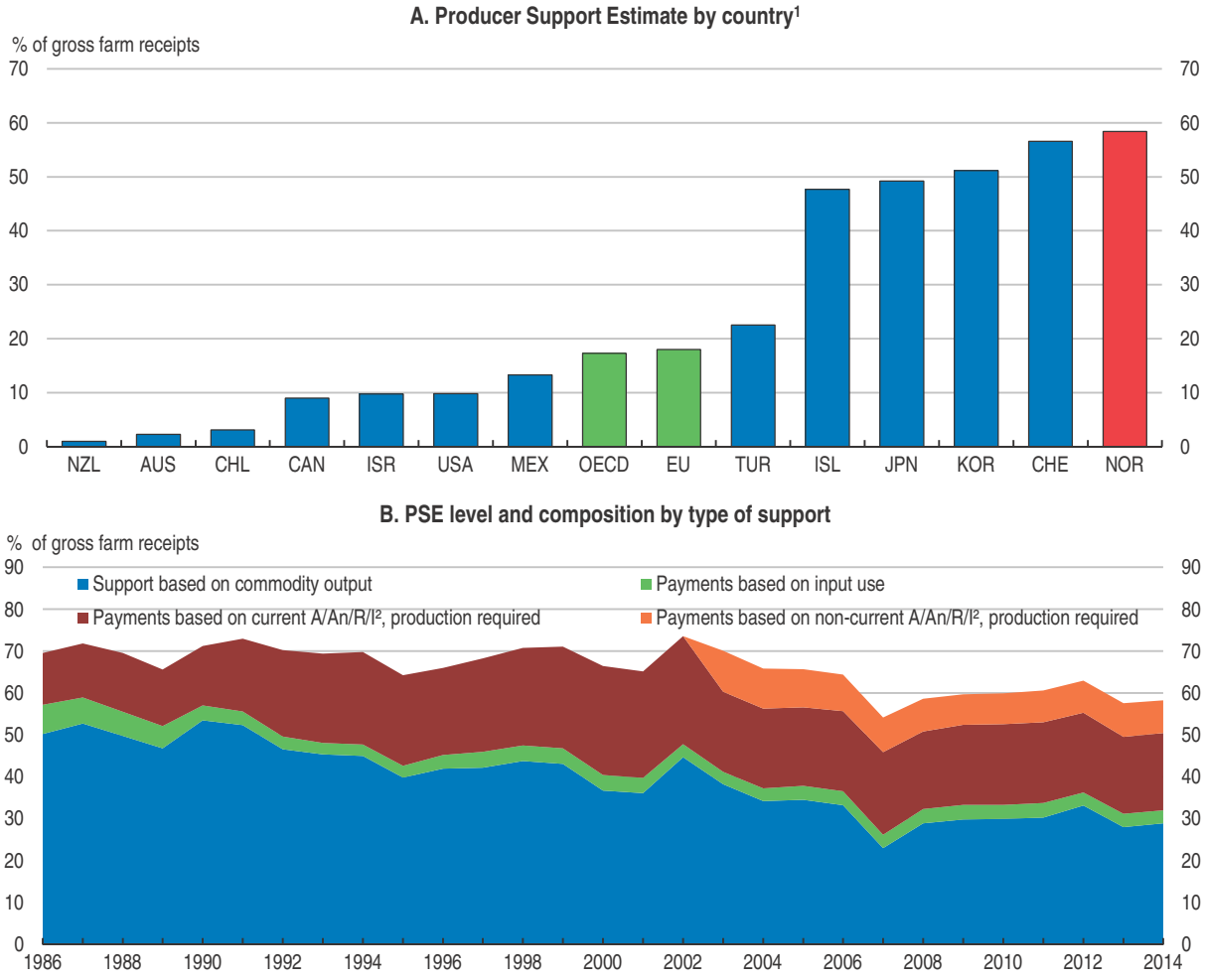
Other indicators of producer support notably include the ratio of farm-gate prices to equivalent border prices (the Producer Nominal Protection Coefficient), which reflects the degree of domestic-market protection, for instance through tariffs. Also, producer single-commodity transfer (SCT) estimates are calculated. Similar indicators for consumer support are also available. In Norway the latter are negative, reflecting the importance of implicit support by consumers of the farm sector via the tariffs.

Source: See OECD (2008) for further details.

Average support per farm in Norway is substantial. Dividing the total value of producer support by an estimate of the number of farms (Table 2.3, Producer Support Estimate) suggests that, on average, each farm receives support worth around NOK 570 000 per year (about EUR 62 000 at an exchange rate of 9.2). Support based on commodity outputs, largely reflecting the customs tariffs, is worth about NOK 280 000 per farm (i.e. about EUR 31 000), while among direct forms of financial support, the largest item are payments based on current area or animal numbers, worth nearly NOK 180 000 (EUR 19 500) per farm.

Neither is the cost of support to the population at large trivial. Calculations shown in Table 2.3 suggest, on average, producer support is costing (directly or indirectly) each Norwegian household around NOK 10 400 a year (or around EUR 1 100). Support based on commodity outputs (largely due to the price of food being inflated by custom's tariffs) costs about NOK 5 100 per household each year (i.e. around EUR 550). As most of the remaining support is in the form of payments from government, the cost to households comes via fiscal channels.

Figure 2.7. **Norway's agricultural support**



1. 2014 data.
2. Area (A), animal numbers (An), revenue (R), or income (I).

Source: OECD (2015), "Producer and Consumer Support Estimates", *OECD Agriculture Statistics* (database).

StatLink http://dx.doi.org/10.1787/888933315121

The substantial financial value of support for the agricultural sector largely reflects limited progress in reform. Two or three decades ago the scale and composition of Norway's agricultural support was not so different from that of most other European countries via the EU's common agriculture policy. Changes in the latter (albeit often slow and difficult) have led to a reduction in the level of support, while that in Norway has not altered significantly (Figure 2.6). In fact, changes to the Norwegian system have often been through external pressure, rather than domestically driven reform. For instance, implementation of the World Trade Organisation's Uruguay Round Agreement on Agriculture has forced alterations to the target price system as this did not fit in with the rules of the "amber box".

These high levels of support are likely to become increasingly untenable over time. External pressure for Norway to decrease its import tariffs on agricultural imports is unlikely to diminish. Indeed, a government white paper on globalisation and trade warns that future trade agreements may mean significant reductions in tariff protection (Ministry

Table 2.3. **The scale and composition of Norway's agricultural support according to the OECD's support-estimate system**

The monetary value of support, reference year 2014

	Total value, NOK million per year	Per agricultural holding		Per Norwegian household		Comment
		NOK	EUR	NOK	EUR	
I. Total value of production (at farm gate prices)[1]	27 563	642 861	69 876	11 732	1 275	
II. Total value of consumption (at farm gate prices)[1]	29 430	686 402	74 609	12 526	1 362	*The similar figure compared with production reflects that net food imports roughly balance net food exports in Norway.*
III. Producer Support Estimate (PSE)	24 364	568 246	61 766	10 370	1 127	*Measures the total value of direct support to individual agricultural producers.*
a) Support based on commodity outputs	12 067	281 450	30 592	5 136	558	*Largely reflects indirect price support from Custom's Tariffs.*
b) Payments based on input use	1 309	30 519	3 317	557	61	*E.g. the Fuel Tax Subsidy.*
c) Payments based on current area or animal numbers	7 684	179 220	19 480	3 271	356	*E.g. the Acreage Support Programme.*
d) Payments based on non-current area or animal numbers	3 247	75 718	8 230	1 382	150	*E.g. the Cultural Landscape Payment.*
IV. General Services Support Estimate (GSSE)	1 532	35 720	3 883	652	71	*Comprises general support for the agricultural sector; for instance, publically funded agricultural research.*
V. Consumer Support Estimate (CSE)	-11 343	-264 549	-28 755	-4 828	-525	*Largely reflects indirect price support from Custom's Tariffs.*
VI. Total Support Estimate (TSE)	26 470	617 351	67 103	11 266	1 225	*Measures total net support to the sector.*
R. Transfers from consumers	12 143	283 214	30 784	5 168	562	*Largely reflects indirect price support from Custom's Tariffs.*
S. Transfers from taxpayers	15 138	353 068	38 377	6 443	700	*Largely reflects direct payment mechanisms.*
T. Budget revenues (-)	-812	-18 930	-2 058	-345	-38	

Note: Per household calculations assume 2.35 million households based on Statistics Norway data, per agricultural holding calculation assumes 42 876 holdings based on Statistics Norway data. Conversion from NOK to EUR is based on an exchange rate of 9.2

1. Gaps between the value of production and value of consumption at farm gate prices in the OECD's producer support estimates arise because the volume of consumption (for most products) is higher than domestic production, reflecting positive net imports.

Source: Calculations based on *OECD Producer Support Estimates (PSE) database*, 2015.

of Foreign Affairs, 2015). Domestically, increasing need for a more productive non-oil economy over the coming decades due to secular decline in petroleum-related activities (and incomes), will likely see heavily subsidised sectors, such as that for agriculture, come under increasing scrutiny as belts tighten and the cost of such subsidies becomes more strongly felt. Agricultural policy needs to help prepare producers for change, guiding them towards more sustainable and competitive production.

The current government has ambitious plans for reform

Agricultural-policy reform is on the present government's agenda, which is encouraging. A government position paper outlined a plan whose tone is essentially one of cautious liberalisation (Government of Norway, 2013). It mentions reducing tariff barriers, lifting quotas and licensing restrictions on agricultural production and proposes changes to inheritance and land-use laws. In addition, the position paper emphasises a desire for clearer distinction between agricultural policy and regional policy, providing a greater focus of support on production rather than land use and says that the main objective of agricultural policy must be to promote cost-effective food production.

Reflecting these intentions, the government has launched several commission and white-paper processes (Table 2.4) for instance, a report on the system of market regulation was released in June 2015.

Table 2.4. **Commissions and white papers underway relating to the agricultural sector**

Topic of commission/white paper	Status
Market regulation system (for instance target prices and market regulation in agriculture)	Initial report released June 2015, public hearing until October 2015
Simplification of agricultural support	Report released in December 2015
Climate change	Report released in February 2016
Environmental schemes	Report released in March 2015
Milk quota system	Report released in March 2015

Some adjustments to support mechanisms along the lines outlined in the government's position paper have already been implemented, most aiming at encouraging larger-scale production. In particular, ceilings on total support per farm have been increased, with a view to encouraging larger units. In the short run this implies an increase in the total value of direct financial support for the longer term the hope is that the move will speed up structural change and reduce the average support intensity. Among the detailed adjustments:

- In dairy, the cow-milk quota has increased from 400/750 (single farm/co-operatives) tonnes per farm per year to 900 tonnes; a similar increase applies for goat milk. Furthermore, special (and favourable) regulations for co-operatives have been removed. Allowing larger farms will probably contribute to a reduction in total support, since support per produced unit (support intensity) declines with output and because there is a total milk quota that limits national output to about 1.5 million tonnes.
- For poultry, farm-level chicken and turkey quotas have been doubled (for chicken each farm unit can now sell up to 280 000 birds per year, for turkey the limit is now 60 000).
- Some support measures (mainly relating livestock) have been made less degressive, discouraging high cost farms run on a part-time basis.
- Some minor support mechanisms (out of the total of around 100 schemes) have been removed.

Further measures are in the pipeline. For instance, a government proposal is currently before parliament to annul the Concession Law (see Table 2.2) that authorises price regulation in the real-estate market for agricultural and forestry land and restricts corporate ownership. Also, the government intends to phase out export subsidies for agricultural produce by 2019 as part of a wider strategy on trade policy (Ministry of Foreign Affairs, 2015).

There remains considerable scope for further action

Some forms of agricultural support are more distorting than others. OECD policy analysis applies a broad rule is that support for commodity output and subsidies on variable inputs are the most distorting. These forms of support most directly affect recurrent marginal revenue and costs which basic economic theory of the firm implies are key to the determining the level of production. In contrast, support to investment and, for

instance acreage support that is not tied to production is less distorting. Though in practice drawing a distinction between highly distorting and less distorting support is potentially less clear cut. For instance, it can be argued that investment support can generate long-lasting distortions and inefficiencies if it means producers committing to produce uneconomic foodstuffs in an inefficient way.

Given the scale and scope of agricultural support in Norway, it is changes in this area that must do much of the heavy lifting to achieve greater sustainability in rural economies. Reform should centre on achieving goals at less cost to taxpayers and consumers. Specifically, further policy actions should, roughly in this order:

- Start reducing import tariffs as soon as possible, preferably through a legislated multi-year programme of cuts so as to signal policy commitment and provide a planning horizon for producers.
- Reduce direct payments for output and inputs to increase exposure to market signals and remove measures blocking structural shift towards more productive units.
- Further strengthen links between policy-objective and pay out for cultural and environmental support mechanisms.
- Liberalise legislation on land-use and land transfer. Moves to lighten the regulation can only be applauded, as some aspects of these rules are a key impediment to progress in moving towards a more viable agriculture sector.

In addition to altering support mechanisms, an assessment of whether the current format of annual negotiation between government and farmer representatives is well suited to promoting reform and change is required. The negotiation process is not without merit, providing a means for regular evaluation and adjustment to the system and also ensuring that farming unions are signed off on changes to the system. Also, the recourse to parliamentary vote in the event of a breakdown in negotiations, as happened in 2014, implies progress is possible without the agreement of farming representatives via the negotiation process (though, of course, getting sufficient parliamentary support may itself be challenging). Still, the importance of the negotiations as a platform for the farming interests should not be underestimated. The fact that the negotiations focus almost exclusively on farm incomes is especially worrying, implying the interests of the wider public are perhaps getting short shrift.

Admittedly, such reform can be politically challenging and progress is likely to be step-by-step. Australia's reform experience provides a good example of substantial change achieved through reforms spread over time, and this is the more likely path of Norwegian reform (Box 2.2). Meanwhile, New Zealand's experience illustrates that a more abrupt reform can also work. Reform in Norway will require stakeholders to embrace, rather than resist, further change in farming activity and land-use. For some this will require rethinking the view that the production of food should be paramount, even when far from economic viability. These views are often based on ideas that farmers have a "right to farm" and on rather specific notions of how best to preserve cultural identity, manage landscapes and address food-security (see Box 2.3).

Box 2.2. **New Zealand's and Australia's experiences in substantial reform of support for agriculture**

Prior to reforms in 1984, New Zealand had an extensive system of agricultural support. This included price supports for sheep meat, beef, wool and dairy; input subsidies for fertiliser, transport and pesticides; taxation incentives; low interest loans and debt write-offs. Indeed, in 1983 New Zealand's Producer Subsidy Equivalent was 34% and support was equivalent to 4% of GDP (Vitalis, 2007). Beginning in 1984, as part of broader economic reforms, all government support for agriculture was withdrawn, much of it in a short space of time. Measures included the abolition of minimum-price schemes, deregulation of producer boards and the removal of capital and input subsidies. The reforms led to productivity increases from more efficient use of inputs, diversification in outputs and innovation in farms' business models. One of the more long term impacts of the reform in agricultural support policy was land use change, farmers made decisions which reflected movement in international markets, in particular, the sheep sector shrank (and became more efficient, though through less upscaling in operations than some had anticipated), while horticulture and dairy sectors expanded. Interestingly, negative social impacts on farming communities were not as great or as long-lasting as many had predicted (Vitalis, 2007). Also, reform proved to have several positive environmental effects, including conversion of marginal pasture to forest and more targeted and efficient use of fertilisers.

Reform in Australia was less intense. It began in the early 1970s, when governments sought to limit the amount of budgetary assistance, for instance replacing "guaranteed" prices with "stabilised" prices in the wheat and dried vine fruits industries and placing greater emphasis on providing adjustment assistance. Reflecting wider economic reforms, the 1980s and early 1990s saw measures aimed at making decision-making more responsive to market forces, and progressive reductions in rates of assistance across the sector. Among other things, the domestic wheat market was deregulated, state-based production and pricing controls for eggs were withdrawn, domestic administered prices and export controls for sugar were terminated. By 1995, all such assistance was removed for most principal agricultural commodities. Australia's dairy was fully deregulated in 2000 when states repealed controls over sourcing and pricing of milk. Tariffs were progressively phased down or out in other industries (dairy, dried vine fruits, sugar and wine). During the 1990s and 2000s, competitive conduct legislation was extended to agricultural marketing boards. The more gradual reform process in Australia makes the impact of reform less "visible" in the data than in the case of New Zealand, but in-depth assessment (for instance, Gray et al., 2014) points to similar impacts, such as greater innovation and diversification and some upscaling in the size of operations as impediments to autonomous structural adjustment were removed.

The Australia and New Zealand experiences, illustrate that substantial reform of agricultural support is certainly possible. New Zealand's "shock therapy" approach of abrupt withdrawal of support meant a rapid shift to a more efficient resource allocation. This implies greater net economic gain for society as a whole over time compared with incremental reform. Concerns among policymakers and the public that rapid reform can bring disruption and hardship to farmers and agricultural communities typically precludes such an approach, however the New Zealand experience suggests that such negative effects may be less than anticipated.

Note: Based on advice and inputs received from the Australian and New Zealand Delegations to the OECD.

Box 2.3. **Food security: Does maximising domestic food production make sense?**

Some claim that Norway's heavy subsidy of agricultural production is necessary because of concerns about food security. *Prima facie* it appears a valid point, maximising domestic food production means more food is available locally, and so supplies could be viewed as more secure. However, the argument does not stand up to closer scrutiny:

- Given today's geopolitics and global trade in food, the likelihood of a "siege scenario" where Norwegians have to "feed themselves" with little or no means of importing food is remote. Furthermore, it is questionable whether readiness for such an event is best served by maximizing food production on an ongoing basis. For a start, this approach does not ensure food supplies if inputs cannot also be sourced domestically (as illustrated above, the import content is fairly high in Norway). And, economically, it makes more sense to form contingency plans involving, for instance, emergency food stocks, ensuring current agricultural production systems remain efficient and productive, and strategies for ramping up food production rapidly if needs be.
- In addition, maximising local production is a questionable goal when considering the wider concept of food security – typically defined as a situation where sufficient food is: a) available to meet the population's full range of nutritional needs; b) accessible; and c) well utilised and there is stability across these three dimensions over time. Actually, security according to these criteria is arguably better served with openness to trade and limited support for local production, especially when local climate and conditions permit the production of a comparatively narrow range of foodstuffs (Brooks and Matthews, 2015). For example, recent OECD work on Indonesia suggests that its current drive for self-sufficiency has increased the risks of food insecurity in the face of natural disasters or economic shocks (OECD, 2015a).

Prospects and challenges in selected non-agricultural sectors: Fishing, aquaculture and tourism

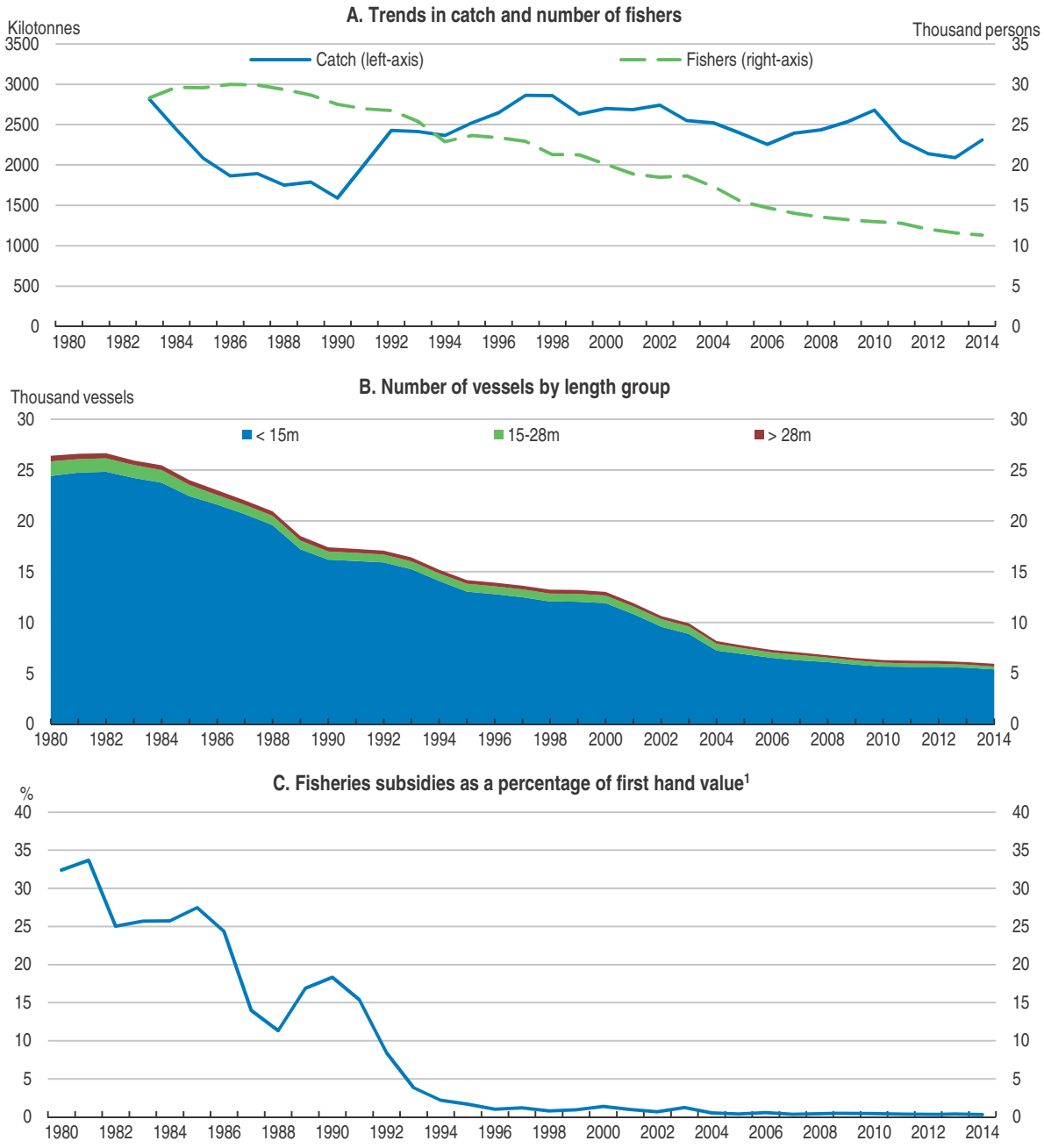
Achieving sustainability in rural economies more efficiently and effectively not only requires change in agricultural support but also concerted and co-ordinated efforts to ensure sustainability in other rural activities and the encouragement of diversification. This section examines developments in fishing, aquaculture and tourism.

Fishing industry: A largely successfully re-structuring continues

Traditional ("capture") fishing and related downstream activities, such as fish processing, are central to many of Norway's small and remote communities both economically and culturally.

The fishing industry has undergone dramatic change in recent decades. The total volume of fish landed (predominantly cod at present) has remained comparatively constant, fluctuating between 2.5 and 3 million tonnes per year. Meanwhile direct employment in the industry has fallen considerably. Today there are around 11 000 registered commercial fishermen, compared with around 20 000 in 2000 and many more than that in earlier decades (Figure 2.8). In addition, the fishing fleet has downsized and shifted towards larger vessels; there are about 5 500 boats currently licensed to fish. Nevertheless, despite the diminishing number of fishermen, the industry remains important to a large number of coastal communities, in part due to downstream activities, such as fish processing.

Figure 2.8. **Trends in fishing**



1. The first hand value corresponds to the value of unrefined fish, either fresh or frozen.

Source: Norwegian Ministry of Trade, Industry and Fisheries.

StatLink http://dx.doi.org/10.1787/888933315137

As is the case elsewhere, policy on fishing centres on preventing over exploitation of fish stocks. Without intervention the industry is vulnerable to the "tragedy of the commons"; depletion (sometimes beyond repair) of a common resource due to use by an industry that has little means or incentive to exercise the necessary constraint. Typically this arises because there are numerous resource users or that the depletion process is of no great consequence to commercial interests in the short run. Crises in fish stock levels have often been a catalyst for introducing mechanisms to limit fishing activity and capacity. For

Norway, problems in herring stocks in the 1960s and 1970s and with Atlantic cod stocks in the 1980s were significant, for instance the latter being a key driver for a switch to today's vessel-based quota system (see Table 2.5).

Table 2.5. **Key features of policy regarding the fishing industry**

The quota system	
Individual Vessel Quotas ("IVQs")	• The quotas are provided by the authorities (without charge) and legally tied to vessel (not the owner). • For most fish types, national total allowable catches are determined by negotiated international agreements (notably with the European Union and Russia). • The national quotas are then distributed across vessel groups and thence to each individual vessel.
Structural Quota System	• Fishing quotas from one or more vessel can be transferred to another vessel; the vessels stripped of its quota must be scrapped. Side conditions, *inter alia*, only allow trading within vessel categories and cap the total quota on single vessel. • The mechanism is primarily aimed at reducing fleet capacity but also creates a partial market for the transfer of quotas.
Monitoring and enforcement	• Since 2009, a national advisory group has been operating in an effort to increase co-ordination between the various government agencies involved in combatting illegal, unregistered and unreported fishing activity ("IUU" fishing). It is believed that those engaged in such activities often links to organised crime, including drug-related activities.
Notable support mechanisms	
Special income support for fishermen	• A minimum income scheme to top-up incomes during lulls in fishing activity, for instance due to bad weather or exceptional ice conditions. The size of the payment partly depends on value of past claims. Pay outs from the scheme vary considerably from year to year, but are fairly small in the order of several million kroner.
Processing-industry support	• Payments are available for transporting fish from areas where processing facilities are in high demand to those of low demand with a view to supporting processing in vulnerable regions. • Under certain conditions vessels must take catches to certain processors. • Exemptions to the rule that vessels must be owned by active fishermen have been given to allow some processing units to operate vessels. • There are programmes encouraging vessels to land fresh (as opposed to frozen) fish, which gives processors more product options.
Sealing-industry support	• Incentive payments for sealers to catch the quota set under Norway's seal-population management scheme. In 2014, the support totalled NOK 12 million. In 2015 the Parliament decided not to give financial support to the sealing industry.

Source: Based on OECD Review of Fisheries Policy (2013b).

The development of policy has had a much stronger focus on economic sustainability than is the case for agricultural support. True, the system protects smaller operators to a degree. For instance, the quotas are allocated according to a fixed distribution across different sizes of vessel. Also, income top-ups are available when, for instance, bad weather prevents fishing (Table 2.5). Yet the system certainly allows large-scale operations in a way not seen in agriculture. In fact, the industry no longer relies on subsidies to any great extent (see Figure 2.8).

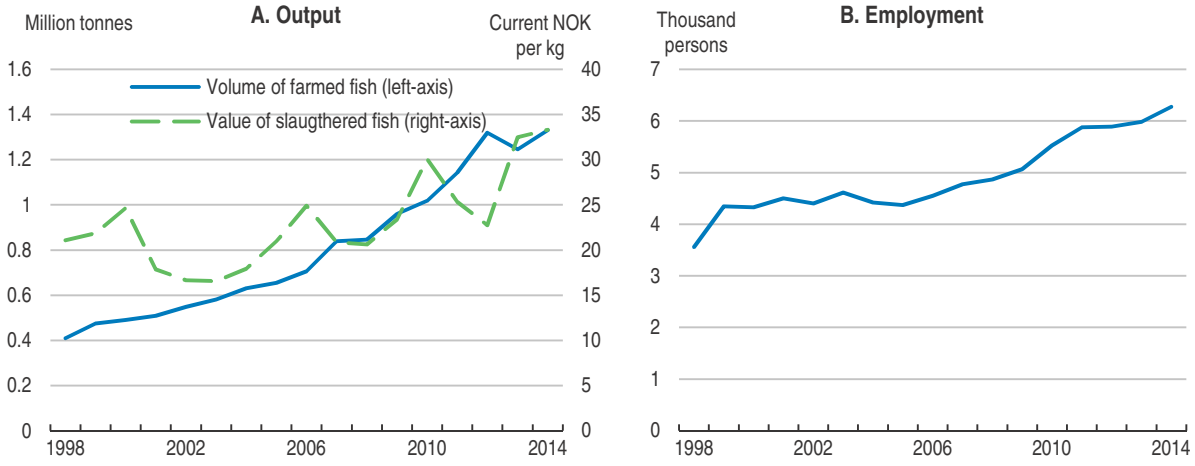
In terms of economic viability, the greatest difficulties lie in the downstream processing industry. Various mechanisms to support processing units, particularly those in remote areas, are in place aiming to provide employment in local communities. For instance, subsidies are available for transporting fish to processing units where demand is low and some vessels are obligated to process catches in specific processing units. The industry has nevertheless long been downsizing and in recent years the rapid growth in markets with very much lower processing costs than those in Norway, such as South East Asia has put even greater pressure for change (on-board vessel refrigeration means processing can take place more or less anywhere). For instance today, there are only 10 white-fish filleting plants located in Norway compared with about 100 in the 1970s.

Similar to the approach taken in the quota system, reform should focus on encouraging restructuring towards greater economic viability, for instance through greater vertical integration in the industry. This latter point was emphasised by a commission on seafood industry in 2014, along with call for fewer restrictions in the industry, such as those regarding vessel ownership. Currently, fishing vessels can generally only be owned by active fishermen. Recent reform proposals by the government to enhance competitiveness include measures that allow small vessels greater flexibility on where fish are landed and increase possibilities for on-board processing for large vessels.

Aquaculture: Success has brought challenges

Aquaculture in Norway has been hugely successful. It is a high-tech, capital intensive industry, dominated by large international companies whose business interests extend to upstream and downstream activities. In this sense, therefore it is more akin to the oil sector than to capture fishing and, certainly, to the agriculture sector. Annual production has increased steadily from about 0.5 million tonnes in the early 1990s to over 1.3 million tonnes in recent years (Figure 2.9 and OECD, 2013b), and seafood exports are currently worth around NOK 60 billion per year (i.e. about 2% of GDP). Salmon production accounts for over 90% of the fish produced (in volume terms). The industry's expansion partly reflects growing global demand for salmon and abundant supply potential along Norway's extensive coastline. Aquaculture suits sheltered conditions and relatively stable water temperatures, and Norway's coastline ticks both these boxes with its numerous inlets and islands combined with the ameliorating effect on water temperatures from the Gulf Stream.

Figure 2.9. **Trends in aquaculture**



Source: Norwegian Directorate of Fisheries (2015).

StatLink http://dx.doi.org/10.1787/888933315147

Policy measures also contributed to aquaculture's expansion, concentrating even more than fishing policy on encouraging commercially viable enterprise. When the industry was first established in the early 1970s, as in the other food sectors, regulations encouraged the preservation of small-scale production and local ownership (Aarset and Bernt, 2004). Falling prices in the 1980s (due partly to supply increases reflecting success in tackling disease) prompted change as producers struggled to survive. Most notably, regulation of first-hand trade, including price-setting, was abandoned by 1991 and was followed by a softening of

rules on who could invest in the industry and cancellation of rules limiting the sale of fish farms. In 1990 the ten largest aquaculture firms accounted for 8% of Norwegian salmon and trout production, by 2001 this had risen to 46% (Aarset and Bernt, 2004). Pursing commercially oriented reform in aquaculture has undoubtedly been helped by there being little cause for resistance to change; it is a relatively recent industry and never a substantial employer in the way that fishing and agriculture once were.

However, aquaculture's expansion has brought environmental risks that threaten the sustainability of the industry and other activities and this is now the central policy issue for the industry. The authorities' approach is guided by the *Strategy for environmentally sustainable Norwegian aquaculture policy* published in 2009, which focusses on reducing the downside risks from aquaculture, especially environmental risks. The strategy is couched in terms of five issues: i) genetic interaction and escapes; ii) pollution and discharges; iii) disease, notably parasites; iv) area utilisation; and v) feed and feed resources. The most important problems relate to the escape of farmed salmon into the wild and, linked to this, the spreading of sea lice from aquaculture sites. The government has initiated work to develop and implement indicators, together with action limits, to manage these environmental challenges. The concept is based on a proposal from the Norwegian Institute of Marine Research and the Norwegian Veterinary Institute, with contribution from the Norwegian Institute for Nature Research. The government aims to stimulate further research and will evaluate and continuously update the indicators and action limits (OECD, 2015b).

As long as the environmental risks can be contained, then further expansion of aquaculture output can only be applauded. Yet expectations that further expansion of the sector can play a huge role in helping rural economies diversify should not be overplayed. The high-tech, capital intensive nature of the business means local employment demands are likely to remain fairly limited as will the boost to local incomes. As shown in Figure 2.9, despite the roughly three-fold increase in tonnage since the late 1990s, employment in the aquaculture sector has only increased by about 50%, from around 4 000 to 6 000.

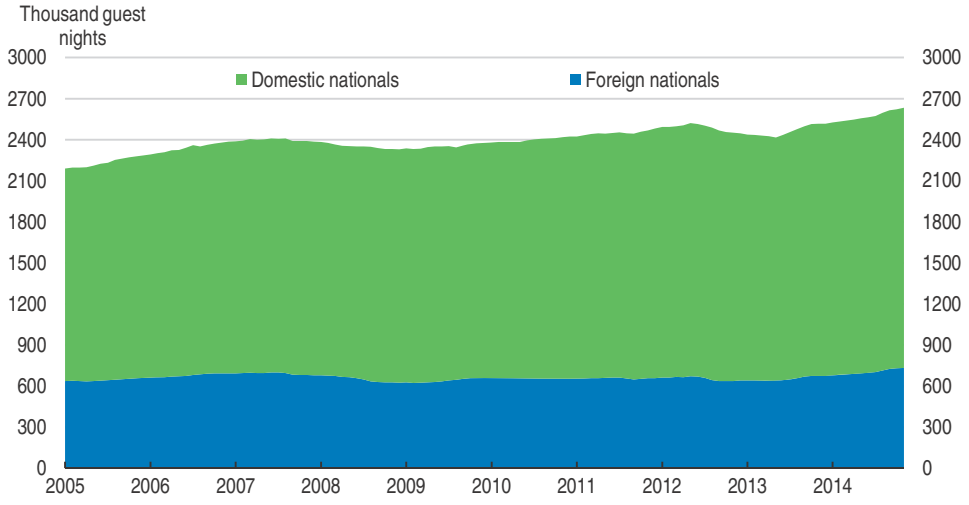
Rural tourism: There remains considerable potential

Norway has considerable natural resources for rural tourism, with many dramatic and unusual landscapes (such as the fjords and arctic landscapes) and uncommon experiences (for instance, the "midnight sun" of the summer solstice in the far north). In addition there are less exotic but nevertheless economically important segments of the tourist industry, notably ski facilities and second homes within easy reach of urban centres and that generally serve the domestic population. Tourism (both urban and rural) accounts for about 3% of GDP and 6% of employment. Guest-night data suggest an upward trend in domestic tourism, but little trend growth in inbound foreign tourism (Figure 2.10).

However, tourism and travel in Norway is comparatively expensive, and consequently inbound tourism is fairly specialised. This is reflected in the World Economic Forum's tourism and travel competitiveness index in which Norway ranks quite well on many criteria, but not on cost competitiveness where it ranks 137th out of 141 countries (see Figure 2.11). Norway's poor cost competitiveness is partly because the country's oil wealth and related activities have ramped up costs throughout the economy and generated a comparatively strong local currency. High prices and a strong local currency affect the volume and nature of tourism from abroad but also that of the domestic population, encouraging foreign travel and tendency to seek budget solutions to domestic leisure activity (for instance this may partially account for the preponderance of second homes).

Figure 2.10. **Trends in tourism**

Average monthly guest nights over the previous 12 months

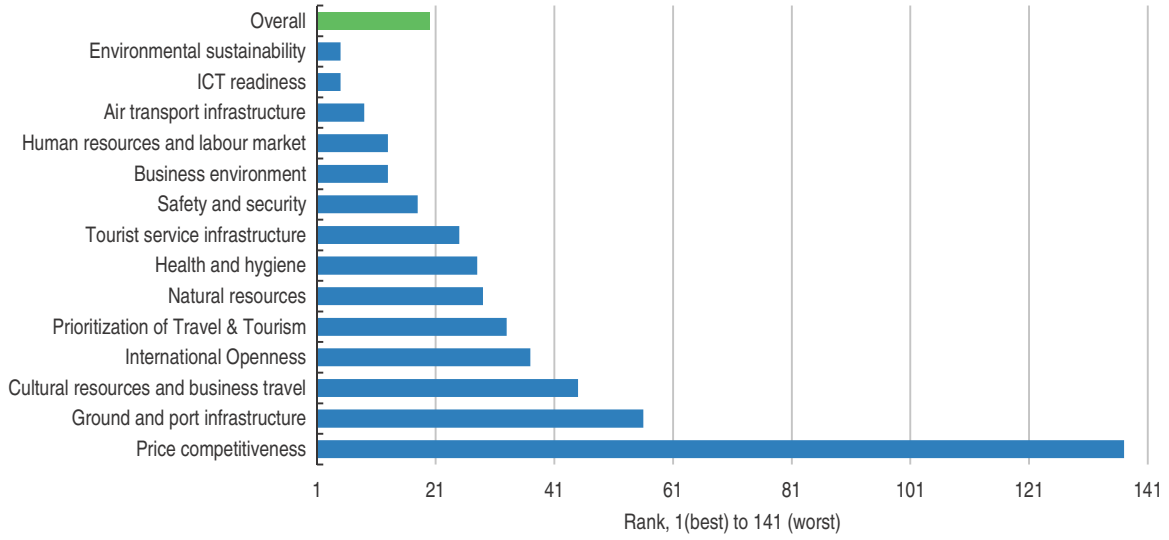


Source: Statistics Norway (2015), Table 8401.

StatLink http://dx.doi.org/10.1787/888933315154

Figure 2.11. **High price is a major barrier of competitiveness in Norway's tourism industry**

Norway's travel and tourism competitiveness rankings by pillar among 141 countries



Source: World Economic Forum (2015), *The Travel & Tourism Competitiveness Index Dataset*.

StatLink http://dx.doi.org/10.1787/888933315168

Tourism responds to price changes. Therefore, episodes of currency depreciation, such as that which occurred when oil prices fell in late 2014 and early 2015 are certainly a bonus for the sector, and have a positive effect on the trade balance. For the longer term, economic transition in response to declining oil-industry activity, in principle suggests improved cost competitiveness via domestic-price and exchange-rate adjustment and this will also benefit tourist activity. Still, policy thinking on tourism should not count on huge gains on this front. Any trend improvement in cost competitiveness will probably be gradual and Norway's margin on low-cost destinations is likely to remain substantial.

Furthermore, the remoteness and climatic conditions in many of Norway's tourist destinations mean there are unavoidable additional costs compared with many other destinations. Certainly for inbound tourism, Norway is likely to remain a comparatively niche market, and highly seasonal, for the foreseeable future.

General macroeconomic policy and structural policy that improve framework conditions for the domestic services sector as a whole are generally also good news for the tourism sector. Issues relating to wages and labour flexibility, planning regulation and transport infrastructure are of greatest relevance. Specific regulatory issues of particular concern for the tourism sector include, uneven control and enforcement of food and drink regulation across municipalities and shop-opening hours regulation (especially restrictions on Sunday opening).

However, there are complications and trade-offs in tourism policy. In the Norwegian context, getting the balance between developing tourism (for instance by relaxing planning regulation) and ensuring the essential qualities of tourist destinations are retained is challenging given the nature-based, "wilderness" dimension of many top attractions. Government-sponsored promotion of tourism in Norway is conducted by Innovation Norway, a government agency operating under the Ministry of Trade and Industry, with wide responsibilities in promoting Norwegian business.

Ensuring tourism issues get sufficient airplay in policy design can be a challenge in itself. To this end, OECD analysis emphasises that the policymaking process can often better exploit the linkages, synergies and trade-offs between tourism and related policy areas, such as the promotion of small-and-medium enterprise and environmental policy (Haxton, 2015).

Regional policy and rural development

Regional policy can also play a positive role in encouraging economic sustainability in rural areas. "Soft" government support in the form of information services and promotional campaigns, similar to that used in tourism, can make an important difference at the margin. Also, financial incentives encouraging businesses to locate in economically weaker regions can usefully help policy shift away from a focus on subsidy and towards investment.

The pros and cons of Norway's regionally differentiated employers' social contributions

As in many countries, the tax and transfer system is tilted towards encouraging businesses to locate in certain regions. Unlike the approaches taken in many countries Norwegian policy on this front has a welcome transparency and simplicity. Indeed, there is only one major direct and dedicated mechanism of regional financial support in the form of regionally differentiated employer social contributions.

Regionally differentiated employers social contributions were introduced in 1975. The standard employer social contribution rate is 14.1% (of gross wages). Meanwhile, lower rates apply to five geographical zones; rates range from 10.6% in the southernmost zone to 0% for the northernmost zone (EFTA, 2014). The zones cover most of the land area of the country but only about 18% of the population (i.e. around 1 million people). In effect, the standard social contribution rate applies only to the Oslo area and to some other coastal urban centres in the southern part of the country, such as Bergen. Given the importance of the wage bill in costs of most enterprises, the mechanism provides a powerful financial incentive to locate in the less populated areas of the country.

As Norway is part of the European Free Trade Agreement, the regionally differentiated employer contributions are subject to scrutiny under the Agreement's state-aid rules. A legal case was brought in the 1990s, initially resulting in a decision that such differentiation transgressed the rules and Norway was condemned to abolish it. However, the Norwegian authorities successfully made a counter argument in favour of retaining the mechanism on the grounds that it is an allowable form of regional aid, helping prevent rural depopulation. In accordance with the latest assessment by the European Free Trade Agreement Surveillance Authority (published in June 2014), the Norwegian authorities are committed to commissioning an evaluation of the scheme that will assess whether the scheme accords with state-aid regulation criteria requiring that such support schemes have tangible impacts in relation to stated objectives.

In many respects, the regionally differentiated social contributions are a good way of supporting rural communities. The system is "horizontal" in that it applies to all forms of business activity (save some selected sectors). In this sense it is better than, say, agricultural support, as it does not prejudge what economic activities are appropriate for rural areas. And, furthermore, the mechanism favours businesses where the wage bill forms a large proportion of costs, which ties in more closely with the objective of preserving local populations than do, say, investment incentives.

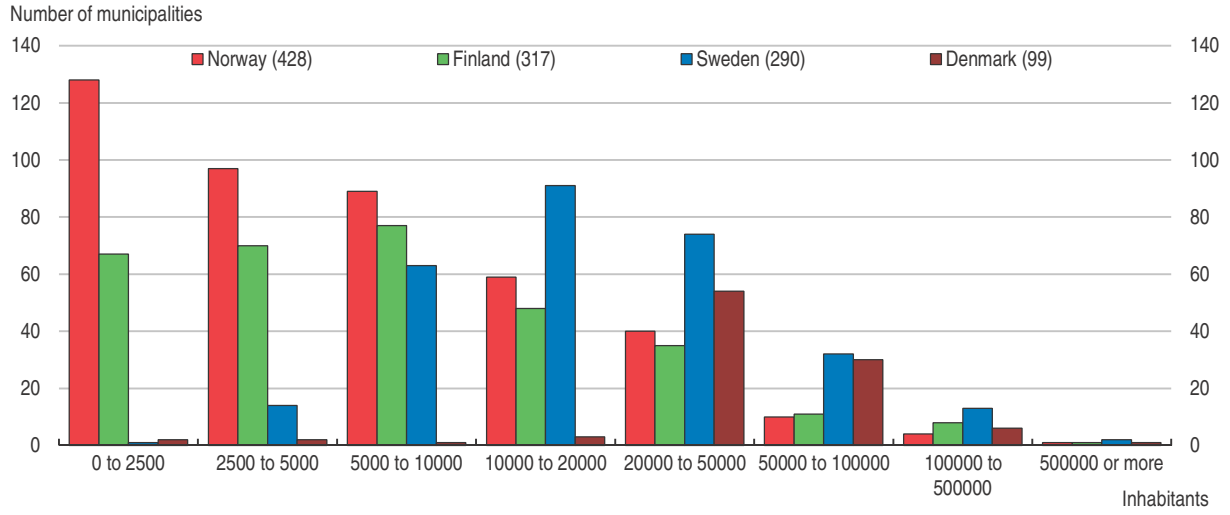
Nevertheless, there are downsides. The deadweight loss may be considerable as the scheme applies to established as well as new businesses and there is no time limit on the support. Indeed, the implicit fiscal cost of the concessionary contribution rates is sizeable. For instance, according to the latest assessment under the European Free Trade Agreement, the forgone revenues amounted to NOK 13 billion in 2013, i.e. equivalent to around 0.5% of mainland GDP and equivalent to a subsidy of about NOK 13 000 per head of the population living in the eligible zones (i.e. about EUR 1 400 at an exchange rate of 9.2). Despite these downsides, regionally differentiated employer contributions are certainly superior to subsidy for specific areas, and could be used to offset cutbacks in the latter.

Avenues for improving local-government efficiency

Norway's sub-national government comprises 19 counties and 428 municipalities of widely varying population. Oslo, with a population of around 650 000 or about 12% of the population, is both a county and a municipality. Meanwhile, the smallest county, Finnmark, has a population of 75 000 and nearly 130 municipalities have populations of less than 2 500 (Figure 2.12).

Counties and municipalities are responsible for substantial segments of education, health services, social support and infrastructure (Table 2.6). This is echoed in the scale of sub-national government spending and in the distribution of expenditure (Figure 2.13). The dividing lines on government responsibilities are, in general, similar to those found in many other counties. For instance, in education local government runs primary and lower-secondary schools, regional government is responsible for upper-secondary education and some types of tertiary education, while national government runs the university sector. However, there are some unusual features. In particular, in the health-care system, primary and secondary services are strongly separated with the former being run by municipalities while the latter are supervised by national government (this is discussed further below).

Figure 2.12. **Size distribution of municipalities**



Note: () indicates total number of municipalities in the country. 2015 data for Norway and Sweden, 2014 data for Denmark, 2013 data for Finland.
Source: Statistics Norway; Statistics Finland; Statistics Sweden; Statistics Denmark.

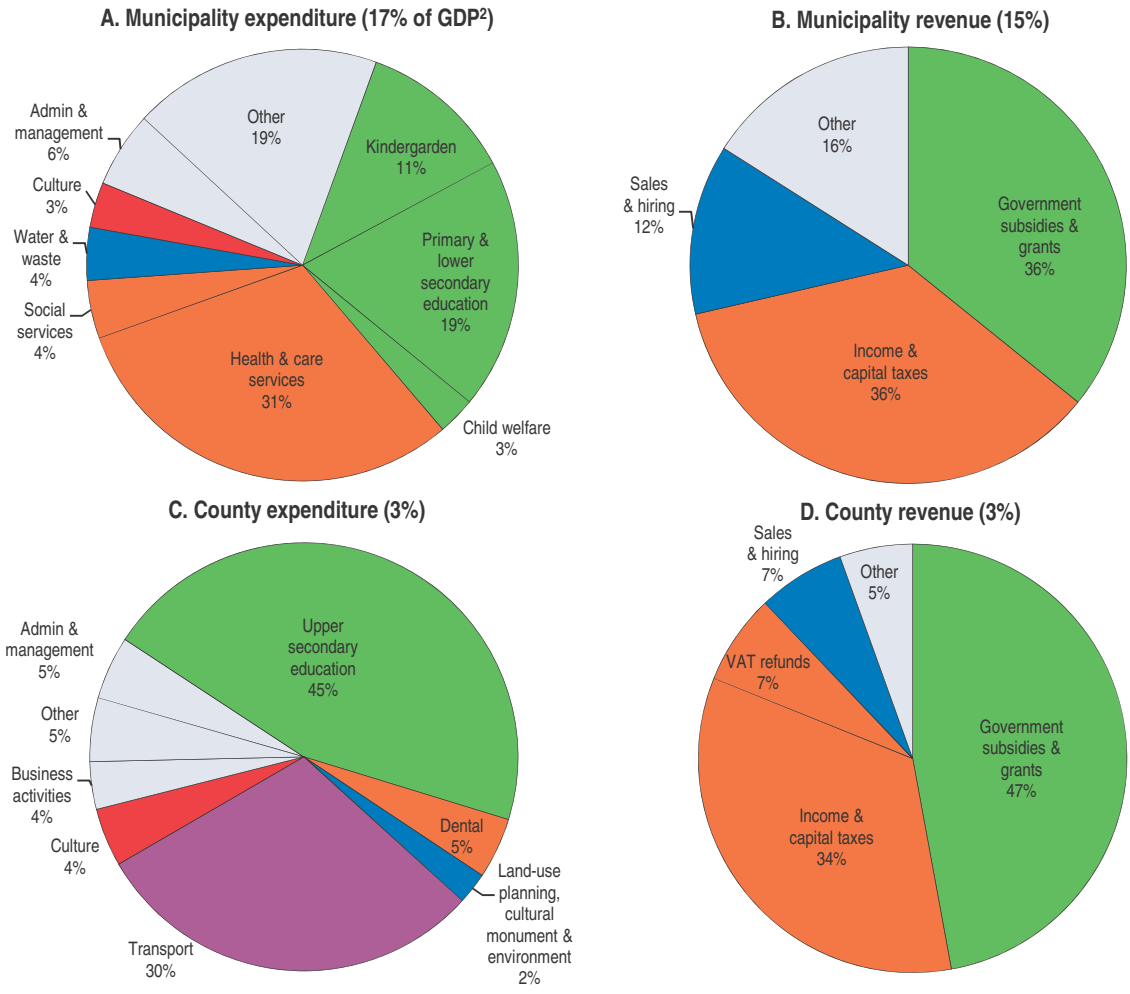
StatLink http://dx.doi.org/10.1787/888933315179

Table 2.6. **The division of responsibilities across levels of government**

	Municipal government (428 jurisdictions)	County government (19 jurisdictions)	National government
Education	• Primary and lower-secondary school (1st grade to 10th grade).	• Upper secondary school. • Vocational training colleges (upper secondary and tertiary).	• University sector (universities and "university-colleges").
Health care	• Primary health care.	• Dental care.	• Oversees secondary health care, notably hospital services which are delivered by four regional health authorities (within which there are 20 health trusts).
Welfare	• Kindergarten services and (most) child welfare services. • Safety net support (cash support and in-kind services). • Elderly care. • Housing support. • Some areas of child welfare.		• Most cash welfare benefits (via the NAV). • Employment services and labour-market training.
Water, transport, energy and communication	• Fresh water and waste water infrastructure and services. • Most hydropower facilities are owned and run by municipalities. • Local (municipal) roads.	• Regional road construction and maintenance. • Local and regional public transport.	• National roads. • National rail system. • Telecommunications and energy.
Other notable roles and responsibilities	• Local planning and development.	• Regional planning development, including attracting greenfield investment and tourism.	• The "usual" national responsibilities, such as national defence, foreign policy and the justice system.

As in other countries, sub-national governments having legal responsibility for a public service does not necessarily mean strong powers in allocating resources or policy direction. This is because central government can exercise influence through financing and regulation. Also, national agreements often drive the wages and employment conditions of county and municipal employees and this also narrows the room for manoeuvre for sub-national government. For instance, funding current education expenses typically occupies a significant share of sub-national governments' outlays but

Figure 2.13. **The composition of municipal and county expenditures and revenues**[1]



1. Country-wide composition, composition across municipalities and counties varies. 2014 data.
2. Mainland GDP.

Source: Statistics Norway, Public Sector Statistics.

StatLink http://dx.doi.org/10.1787/888933315187

there is little leeway to alter the amount spent. Norway's Productivity Commission report (Productivity Commission, 2015) argues that, in broad terms, central-government intervention is excessive and suggests systematic trials to see where scope for reducing central control lies.

Sub-national government financing comprises a mix of block and tied grants from central government, a share of ordinary-income personal-income tax and local taxation (see Table 2.7). The system includes fairly powerful equalisation mechanisms at both the municipal and county levels.

Both municipal and county level governments that meet the balanced budget requirements are permitted to borrow in order to finance capital expenditure (roads, schools, elderly care facilities and water infrastructure). Jurisdictions that do not meet the balanced budget requirement must follow special approval processes (Table 2.7). There is a welcome absence of an explicit central-government guarantee on local and regional government debt.

Table 2.7. **Municipal and county financing systems**

Type of benefit	Details
Main revenue sources	Municipalities: • Income tax: municipalities receive a share of the "ordinary income" personal-income tax (PIT) revenues from incomes of those resident within their jurisdiction as well as share of the net wealth tax. • Tax on immovable property: municipalities have sizeable leeway on which bases are taxed and how. • Block (and tied) grants. • Special taxes and levies on hydropower facilities. • Fees and charges on services to inhabitants. Counties: • Income tax: a share of the "ordinary income" PIT revenues from incomes of those resident within their jurisdiction. • Block (and tied) grants. • Fees and charges on services to inhabitants.
Tax and expenditure equalisation mechanisms	• For municipalities the tax equalisation mechanism is based on tax revenues from PIT, wealth-tax revenue and natural resource taxation (note, not property tax). For counties calculation is based on their revenues from PIT and natural resource taxation. • Municipalities (counties) with tax revenues below 100% of the national average are compensated 60% (87.5%) of the difference between their own tax level and the national average. Municipalities (counties) with tax revenues above 100% of the national average are deducted 60% (87.5%) of the difference between their own tax level and the national average. • For municipalities there is an additional element of tax-equalisation. Those with tax revenues below 90% of the national average receive an extra compensation of 35% of the difference between their own tax level and 90% of the national average. This extra compensation is financed through an equal deduction per capita in all municipalities. • Expenditure equalisation. Municipalities and counties are compensated for differences in "expenditure needs". The latter are calculated on the basis of objective criteria, such as the age structure of the population, travelling distances, socio-economic factors, etc. Expenditure equalisation is carried out as a redistribution within the block grant.
Deficit and debt rules	• Municipalities and countries that meet the balanced budget requirements are free to borrow to finance capital expenditure.
Procedures in case of financial difficulty	• Municipalities and counties that do not meet the balanced budget requirement must have the approval of the county governor or the Ministry of Local Government and Modernisation in order to make lawful decisions about borrowing and long-term leases. • In cases of extreme financial distress sub-national government can be put under administration by central government, but this procedure has never been used.

Oversight and exchange of information on municipal services is facilitated by Norway's "KOSTRA" system in which municipalities and counties log data on a large number of performance indicators. The system is often held as a model approach in international assessment of public administration (see, for instance, OECD, 2014a).

Restructuring municipalities: A scheme promoting municipal mergers is underway

Today's municipal structure is problematic on several fronts. Of particular relevance for rural areas is that small municipalities face difficulties in providing quality services efficiently, due to challenges in tapping into economies of scale and limited capacities and expertise in public administration and in providing some types of service. A common problem is that small municipalities are often engaged in a large number of co-operation arrangements with other municipalities for the provision of services. These often reflect well-intentioned efforts towards providing services efficiently but for many municipalities the number and the complexity of the arrangements is difficult to manage. One study (Leknes et al., 2013) has estimated that there are approximately 1 200 inter-municipal co-operation agreements in operation with each agreement involving on average 5.6 municipalities and municipalities are, on average, engaged in 11 agreements. In addition, municipal borders often do not tie in well with the geography of local economies,

generating significant challenges for co-ordination, though this is a greater problem in urban and suburban areas rather than in rural ones. According to calculations reported in the Norwegian Productivity Commission report (Productivity Commission, 2015), there is room for efficiency improvements of up to 30 to 35% in municipal service delivery.

In an effort to address these problems, the current administration has launched an initiative to encourage mergers between municipalities (there is a long history of such efforts, see Box 2.4). Municipal governments have been required to engage in consultation processes (organised at the county level) to discuss possible mergers. The aim is for these discussions to have been completed by the end of 2016 and for the consequent agreements to merge implemented by 2020. Various financial incentives are being offered, including a one-off payment for merging, coverage of expenses related to the merger process and continuing the payment of those rural grants (for 15 years following the merger) that could otherwise be cancelled if municipalities merge (for instance because of size-related criteria in some payments). However, these incentives do not fully offset assistance for small municipalities built into the funding system.

Box 2.4. **Past restructuring of Norway's municipalities**

Today's local-council system was established in 1837-38. At the time there were around 400 municipalities of various types, but the number subsequently grew; by the 1940s there were well over 700 "rural" municipalities, about 60 "city" municipalities plus several seaports with special status. A committee (the Schei Committee) was established in 1946 to rationalise the system and establish a new legal framework. The committee spent considerable time developing proposals and consulting with municipalities; it did not deliver its final round of recommendations until 1962. The implementation of the Schei recommendations took place between 1958 and 1967 and reduced the total number of municipalities to around 450. Implementation was not technically "voluntary" in that the mergers (and other dimensions of the rationalisation) were legislated and voted on by central government. The committee's lengthy consultations with municipalities probably helped ensure agreement with the proposals at the local level (though in a few instances the Schei reforms were subsequently reversed).

Since the Schei Committee process, a number of national governments have favoured further rationalisation of municipalities but have sought to encourage rather than impose change. In 1995 a government resolution was passed that mergers should *only* be voluntary, i.e. made with the consent of the municipalities concerned. For instance, a programme operated between 2002 and 2006 that encouraged dialogue between municipalities and provided some financial incentives. There are therefore some similarities with the current initiative, though the latter is more forceful, as it is making municipalities engage in a dialogue about reform as well as providing financial incentives.

Enlarging the operational scale of small municipalities would not only help local administrations provide better services more effectively but also potentially create opportunity for greater autonomy from central government. In the present system, strong control and steerage by central government in part reflects the challenges that small municipalities have in developing and managing revenue streams and in running services. If the minimum scale of operations can be ramped up, then central government can potentially give more leeway to the local level. The present government is thinking along

these lines. For instance its manifesto (Government of Norway, 2013) on municipal reform included intentions to bring a pilot scheme for the transfer of tasks from central and county authorities to the municipalities.

Even if there are extensive mergers, some co-ordination and efficiency challenges would remain

Even if the number of small municipalities is reduced, co-ordination and efficiency challenges will remain. Some local governments may continue to be entangled in overly numerous and complex co-operation agreements, for instance, that might be resolved by providing new avenues for co-ordination (giving counties a greater role in administering and brokering co-operative provision by municipalities in may be one way forward).

Also, specific issues in certain public services are likely to remain. In health care, primary care services are provided by municipalities while secondary care services are provided by 20 health trusts which are owned and overseen by 4 regional health trusts, which in turn are supervised by the national government. The absence of strong vertical integration between primary and secondary care can make for problems in co-ordination and efficiency. To their credit, the Norwegian authorities are aware of the challenges. Indeed, that latest major change, the Coordination Reform of 2012 has a central theme of putting greater emphasis on primary care with a view to curbing hospital-care expenditure (Box 2.5).

Box 2.5. **The Coordination Reform in health care**

The Coordination Reform, introduced in January 2012, was designed to meet several concerns notably regarding: i) care co-ordination across health services; ii) incentives to engage in disease prevention and health promotion; and iii) population ageing and the associated rise in complex health and social needs. In broad terms, the measures aimed to shift care toward primary and community care settings away from the hospital sector, with greater emphasis on prevention. It introduced substantial economic and organisational changes principally aimed at giving greater responsibility to the primary health sector (and therefore municipalities). Notable measures include:

- Introduction of financial penalties on local authorities for failing to provide local care to a patient ready for discharge from general hospital such that hospital stays are prolonged.
- Requirements for municipalities and hospitals to enter into binding agreements in order to specify the distribution of duties and responsibilities.
- Requirements that municipalities set up emergency bed services.
- A requirement that municipalities co-finance 20% of hospital costs, this was introduced in 2012 but was terminated in January 2015.

Source: Based on Box 1.2 of *OECD Quality of Health Care In Norway* (OECD, 2014b) which itself is based on Norwegian Ministry of Health and Care Services (2009), "The Coordination Reform, Proper treatment – At the Right Place and Right Time", Report No. 47 to the Storting (2008-09).

Many of the changes proposed in the Coordination Reform (Box 2.5) entail a greater role for municipalities. For instance plans initially included making municipalities responsible for financing a portion of hospital care, and the introduction of financial penalties for delays in the transfer of patients from hospital to community care. In

principle these measures would more closely align the operational incentives of municipalities (as managers of primary care) and secondary-care providers, for instance by reducing cost-shifting. However, a recent review of the quality of Norway's health-care system suggests that reaping the full benefits of the Coordination Reform will require additional measures to improve co-ordination between primary and secondary care, such as new information infrastructure and some capacity building in municipalities (OECD, 2014b). The need for follow-up measures to the Coordination Reform is also acknowledged in the governing coalitions manifesto (Government of Norway, 2013) which included various alterations, including abandonment of the proposal for municipalities to co-finance hospital care.

In education, the organisation and management of municipal-based primary and lower-secondary schooling looks as an area for potential improvement given Norway's performance in international comparisons of student performance at these stages of the education system. The latest results from the OECD's PISA system, which evaluates 15 year-olds, are telling. In the mathematics and science tests Norway ranked 22nd out of the 34 OECD countries, while ranking at little better at 15th in the reading test. Multiple factors are contributing to these outcomes; and as the Norwegian Productivity Commission Report points out, the variable quality in municipal management of schools is likely one of them, given the large number of jurisdictions and wide variation in the scale of operations across them.

As regards welfare programmes, the division of responsibilities between national and municipal government is similar to that in many other countries, with the national government being responsible for the main financial support schemes and local government being responsible for safety-net financial support and welfare services. Yet this does not mean an absence of challenges in ensuring continuity and consistency in services in supporting the unemployed, families and the elderly.

Transport infrastructure planning and execution processes in Norway could be reducing the efficiency of public spending and transport services. Strong planning powers vested in municipal governments can result in complex and prolonged negotiation on the routes for new roads or rail track. Also, as discussed in the Assessment and Recommendations of this *Survey*, the influence of cost-benefit criteria (at least at the national-government level) on project selection is not always very strong. Clearly this second problem can reinforce the first: if municipalities believe project selection by national government is based more on political than economic criteria, then they will probably have few qualms about taking a "not in my back yard" stance. The government has taken, or intends, several measures to combat the problems in infrastructure implementation, including the establishment of an infrastructure fund, a review of parliamentary procedure in infrastructure decisions and improvement to compensation for property owners where projects involve the purchase of land (Government of Norway, 2013). Given that all levels of government are heavily involved in infrastructure development, co-ordination is key, as is stressed by the OECD *Recommendations on Effective Investment Across Levels of Government* (OECD, 2014c).

Changes to sub-national-government financing are planned

As part of a push for some consolidation in the structure of municipalities, the current administration is working on proposals to reform the income system for municipalities. A measure has already been proposed that aims to increase municipalities' incentives to encourage enterprise and employment. The idea is to distribute one percentage point of

the 27% corporate-income tax (i.e. one 27th of the revenue) to municipalities using an algorithm based on growth in the private-sector wage bill. The increased transfer will be met by a corresponding reduction in the transfer of personal income tax to municipalities, so that municipalities in aggregate will continue to receive about 40% of their revenues as taxes. The idea is that the new algorithm more strongly links with private-sector job creation than that implied by the personal-income tax transfer (the size of which depends on other factors, such as public-sector jobs, non-wage income and so on). Further measures are being formulated that, reportedly, will aim to increase the overall role of tax transfers in municipal financing and involve changes to the equalisation system.

Real-estate property tax could play a bigger role in sub-national government financing

Municipalities and counties have reasonable leeway in utilising transfers from central government budgets, as many are in the form of block grants (i.e. transfers that are not linked to specific items of spending) (Figure 2.13). This said, some argue that municipalities' flexibility on this front is sometimes excessively compromised by the use of earmarked transfers by central government as part of specific actions plans; for instance, the Productivity Commission makes this claim (Productivity Commission, 2015).

Municipalities have considerable leeway in choosing what entities to impose real-estate tax on as well as on the method of calculation and rates of taxation imposed. The number of municipalities imposing property tax, as well as the taxes collected, has increased significantly over the last 10-15 years. A wide variety of approaches are taken. Revenue data for 2013 show that nearly 100 municipalities (covering 38% of the population) impose no property tax whatsoever, and that about 206 municipalities (covering about 53% of the population) impose property tax on private dwellings (Table 2.8). Understandably, municipalities take advantage of local circumstances. For instance, quite a number of jurisdictions raise property tax from hydroelectric facilities, in some cases considerable amounts in relation to the number of inhabitants. Also, some municipalities reputedly endeavour to tap into second-homes as a source of property-tax revenue.

Table 2.8. **Coverage and value of tax on immovable property across municipalities**

	Number of municipalities	Share of population	Average value per habitant (where tax imposed) NOK annual
At least one form of property tax	330	63	2 804
of which:			
Property tax on private dwellings	206	53	1 376
Property tax on hydropower	253	47	976
And accounting for at least 50% of revenue	101	7	5 257
Property tax on other forms of property	320	60	949
Memorandum:			
No property tax	98	37	

Source: Municipal revenue data for 2013 provided by the Ministry of Finance.

Given the textbook advantages of recurrent tax on real estate, the central government should encourage municipalities to make greater use of it. It would appear many municipalities have scope to widen property-tax bases which would raise more "own" revenue, giving more leeway to resource allocation. The authorities have recently given

municipalities access to the new property-valuation system being used to calculate wealth tax. This may encourage greater use of property taxation as it provides a ready-made mechanism, potentially cutting through difficult debate on valuation methods and reducing administration costs (Box 2.6). The mechanism's simplicity clearly has advantages but this might not suit all municipalities.

Box 2.6. **Housing valuation for Norway's wealth tax: A potential tool for municipality property taxation**

Real-estate property valuation for tax purposes can be controversial and onerous to administer, and probably prime reasons why many municipalities do not impose such property taxes, particularly on housing. The central-government tax office has recently given municipalities the opportunity to use the system used for valuing domestic property in the calculation of the net wealth tax.

In the wealth-tax system, default property values are calculated using statistical analysis in which valuation data (per metre square) from past house sales is regressed against three variables, type of dwelling, the age of the dwelling and a dummy variable indicating location. In general, separate regressions are run for each municipality but in some cases municipalities are combined to generate enough statistical observations and separate regressions are run for different areas within some of the larger municipalities.

This is accompanied by a "safety valve". Households can suggest a different valuation to the tax authority and this is generally accepted as long as it is backed by reasonable evidence and argumentation, such as valuations by real estate agents (the taxpayers proposal must be a certain percentage below the default valuation, or more, so as to prevent a large number of claims with comparatively little money at stake). The safety valve obviously implies undervaluation of property overall, but in many respects is a necessary mechanism given as the regression-based estimation is fairly basic and misses many of the factors driving property values.

For municipalities the valuation system is potentially attractive as an alternative to self-administered valuation systems as it saves on administration. The simplicity of the system is in many ways a plus but does imply that mean high-value property will tend to be under taxed, and to an extent low-value property over taxed (though the safety valve in principle limits this), compared with a more sophisticated valuation system. In the wealth-tax system the basic nature of the valuation is probably tolerated because in many cases there is a large "discount" (effectively a tax allowance) on property assets, for instance for owner-occupiers only 25% of the market valuation is counted in wealth-tax assessment.

Summing up the challenges

At present, policies and mechanisms are heavily focused on preserving the current structure of rural economies, especially in the case of agriculture. Policy goals and mechanisms need to be clearer, less focussed on preservation of the *status quo* through subsidy and more channelled towards encouraging change that helps rural communities thrive in the long run. The required approach is essentially that advocated in the OECD's general policy advice on rural economies. The "new rural paradigm" (see for instance, OECD, 2014d) encourages the development of a wide range of sustainable economic activities (farming or otherwise) via support for investment and the encouragement of locally determined strategies involving inputs from all relevant stakeholders (for instance, local and regional government, the private-sector and non-governmental organisations).

Compared with many other countries, Norway has made patchy progress in modernising its paradigm for rural support. This is epitomised in the sharp contrast between the fishing and agricultural sectors. The former has seen dramatic re-structuring of the traditional fishing industry and rapid growth in aquaculture while the latter remains very oriented towards preserving the current structure of production, even though many farms face production costs that can only be supported thanks to protection from heavy import tariffs and direct financial support.

The breadth of issues covered in preceding sections underscores that a successful shift in policy on rural areas will require a campaign on many fronts, as summarised in Table 2.9. Aside from agricultural support, attention is needed to regional support and to ensuring promotional and informational support is efficient and that discretionary "sweeteners" to draw in new business to an area are appropriately gauged. The importance of framework conditions should not be underestimated. Good transport linkages enhance the attractiveness and feasibility of living in, and basing businesses in, rural communities. Improving transport can also help overcome the challenges in ensuring access to quality services in rural areas, for instance in health and education. Ensuring quality services also requires attention to the institutional frameworks of service delivery and in particular the roles and incentive structures of sub-national government.

Table 2.9. **Policy issues relating to rural economies**

Policy area	"Classic" issues faced by OECD economies	Situation in Norway
Financial support to rural businesses		
Targeted support mechanisms for rural industries, most prominently, agriculture.	Ensuring support mechanisms achieves goals efficiently.	Limited progress in reform compared with many other OECD countries.
Regional subsidy mechanisms.	Multiple overlapping incentives involving preferential tax treatment and/or subsidies (often for employment).	Comparatively simple with only one major national mechanism.
Non-financial business support		
Promotion and information campaigns supporting rural areas (e.g. for tourism).	Ensuring good co-ordination between campaigns across different levels of government and institutions.	Centralised operation of campaigns via a central-government agency (*Innovation Norway*).
Government (often local) support to businesses, such as assistance with infrastructure to install new facilities in rural communities.	Ensuring transparency, consistency and cost-benefit assessment in the depth and scope of assistance can be challenging.	Similar challenges to other countries. Both counties and municipalities have some leeway to entice business with specific assistance.
Framework conditions (with implications for both businesses and households)		
Public-service quality in rural areas (education, health care, services for the elderly, child care).	Accessibility, quality and cost challenges, especially where rural areas are depopulating.	Municipal and county governments' extensive responsibilities means they have to be play a leading role in reform.
Investment in (and maintenance of) infrastructure in rural areas.	Ensuring project selection is based on economic criteria. Balance between safeguards provided by planning regulation and leeway to develop. Local resistance to projects (NIMBY, not-in-my-back-yard problems).	Final decisions on project selection have a reputation for often departing from those suggested by cost-benefit analysis. Municipalities have strong rights over land use that can be used to resist project proposals.

Gathering the impetus for change requires at least a degree of consensus on policy goals and how to achieve them across a range of government institutions and interest groups. For instance, in agriculture this implies interactions between government and the two bodies representing farmers, the Norwegian Agrarian Association (*Norges Bondelag*) and the Norwegian Farmers and Smallholders Union (*Norsk Bonde – og småbrukarlag*) and may also involve discussions with the agricultural co-operatives (*Landbrukssamvirket*). Ensuring good framework conditions in rural areas regarding public services and transport relies on good communication and incentive structures between central government and sub-central government.

Recommendations on the rural economy

Achieve sustainability in agriculture and rural economies more efficiently and effectively

- Start reducing **import tariffs** as soon as possible.
- Reduce **direct cash support** to farmers for outputs and inputs to increase exposure to market signals and remove measures blocking structural shift towards more productive units.
- Strengthen **links between policy-objectives and pay outs** for cultural and environmental support mechanisms.
- Remove **legislative biases** that favour agriculture.
- Promote greater vertical integration in the **fish processing industry** (with regard to capture fishing, not aquaculture where vertical integration is already highly developed).
- Tackle environmental challenges in **aquaculture** so as to ensure continued viability and minimise negative spill overs.
- Strengthen **regional differentiation of employer contributions** by better targeting to areas where they are most needed.

Encourage more efficient and independent sub-national government

- Encourage **mergers** between small municipalities.
- Improve the efficiency and quality of **public services** in rural areas. Address co-ordination issues in the provision of health care services and quality issues in education.
- Address problems in the selection and implementation of **infrastructure** projects.

Bibliography

Aarset, B. and S.E. Jakobsoen, (2004), "On a clear day you can see all the way to Brussels: the transformation of aquaculture in Norway", *Working Paper*, No. 63/04, Institute for Research in Economics and Business Administration, Bergen.

Brooks, J. and A. Matthews 2015, "Trade Dimensions of Food Security", *OECD Food, Agriculture and Fisheries Papers*, No. 77, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5js65xn790nv-en*.

EFTA (2014), *EFTA Surveillance Authority Decision on regionally differentiated social security contributions (2014-2020)*, EFTA Surveillance Authority, June 2014.

Government of Norway (2013), *Political Platform for a government formed by the Conservative Party and the Progress Party*, October 2013.

Gray, E., M. Oss-Emer and Y. Sheng (2014), "Australian agricultural productivity growth; past reforms and future opportunities", *Australian Department of Agriculture, Research Report*, No. 14.2, 2014.

Haxton, P. (2015), "A Review of Effective Policies for Tourism Growth", *OECD Tourism Papers*, No. 2015/01, OECD Publishing, Paris.

Leknes, E., A. Gjertsen, A.K. Tennås Holmen, B. Lindeløv, J. Aars, I. Sletnes and A. Røiseland (2013), *Interkommunalt samarbeid. Konsekvenser, muligheter og utfordringer* [Intermunicipal cooperation: consequences, possibilities and challenges], *IRIS Research Institute Report – 2013/008*.

Ministry of Foreign Affairs (2015), *Globalisation and trade: trade policy challenges and opportunities for Norway*, Report to the Storting (white paper) Summary.

OECD (2008), *OECD's Producer Support Estimate and Related Indicators of Agricultural Support: Concepts, Calculations, Interpretations and Use (the PSE Manual)*, Trade and Agriculture Directorate, July 2008, OECD Publishing, Paris.

OECD (2013a), *OECD Economic Surveys: Japan 2013*, OECD Publishing, Paris.

OECD (2013b), *OECD Review of Fisheries Policies and Summary Statistics*, OECD Publishing, Paris.

OECD (2014a), *Kazakhstan: Review of the Central Administration*, OECD Public Governance Reviews, OECD Publishing, Paris.

OECD (2014b), *OECD Reviews of Heath Care Quality: Norway*, OECD Publishing, Paris.

OECD (2014c), *OECD Recommendation of the Council on Effective Public Investment Across Levels of Government*, OECD Publishing, Paris.

OECD (2014d), *Innovation and Modernising the Rural Economy*, OECD Rural Policy Reviews, OECD Publishing, Paris.

OECD (2015a), *Managing Food Insecurity Risk: Analytical Framework and Application to Indonesia*, OECD Publishing, Paris.

OECD (2015b), *OECD Green Growth Studies: Green Growth in Fisheries and Aquaculture*, OECD Publishing, Paris.

Productivity Commission (2015), "Productivity – Underpinning Growth and Welfare", *Official Norwegian Reports*, NOU 2015:1.

Vitalis, V. (2007), "Agricultural subsidy reform and its implications for sustainable development: the New Zealand experience", *Environmental Sciences*, Vol. 4:1, 2007.

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where governments work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The European Union takes part in the work of the OECD.

OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

OECD PUBLISHING, 2, rue André-Pascal, 75775 PARIS CEDEX 16
(10 2016 01 1 P) ISBN 978-92-64-20631-1 – 2016

OECD Economic Surveys

NORWAY

SPECIAL FEATURES: HIGHER EDUCATION; AGRICULTURE AND RURAL POLICY

Most recent editions

Australia, December 2014
Austria, July 2015
Belgium, February 2015
Brazil, November 2015
Canada, June 2014
Chile, November 2015
China, March 2015
Colombia, January 2015
Czech Republic, March 2014
Denmark, January 2014
Estonia, January 2015
Euro area, April 2014
European Union, April 2014
Finland, February 2014
France, March 2015
Germany, May 2014
Greece, November 2013
Hungary, January 2014
Iceland, September 2015
India, November 2014
Indonesia, March 2015
Ireland, September 2015
Israel, December 2013
Italy, February 2015
Japan, April 2015
Korea, June 2014
Latvia, February 2015
Luxembourg, March 2015
Mexico, January 2015
Netherlands, April 2014
New Zealand, June 2015
Norway, January 2016
Poland, March 2014
Portugal, October 2014
Russian Federation, January 2014
Slovak Republic, November 2014
Slovenia, May 2015
South Africa, July 2015
Spain, September 2014
Sweden, March 2015
Switzerland, November 2015
Turkey, July 2014
United Kingdom, February 2015
United States, June 2014

Consult this publication on line at ***http://dx.doi.org/10.1787/eco_surveys-nor-2016-en***.

This work is published on the OECD iLibrary, which gathers all OECD books, periodicals and statistical databases.
Visit ***www.oecd-ilibrary.org*** for more information.

Volume 2016/1
January 2016

OECD publishing
www.oecd.org/publishing

ISSN 0376-6438
2016 SUBSCRIPTION
(18 ISSUES)

ISBN 978-92-64-20631-1
10 2016 01 1 P