

## Key points

Productivity growth has fallen in both Norway and Norway's trade partners. Trend growth is historically low, below 1 per cent, compared to around 3 per cent in the period 1996–2005. Continued welfare development depends on increased productivity growth. The Productivity Commission has examined the effects on income per capita and on government budgets of lower employment growth and petroleum activity levels, an aging population and weaker productivity growth. The results indicate that Norway may suffer stagnating living standards and sizable public deficits in the years ahead. Tackling low employment growth and increased health and care needs promises to be challenging.

The petroleum industry has influenced productivity growth by altering Norway's industrial structure. Resources have been shifted into petroleum-related activities through a combination of higher wage growth than in competing countries and the appreciation of the Norwegian krone. Simultaneously, revenues from petroleum resources have helped to shift labour and capital into public and private service provision, which has experienced low productivity growth. Nonetheless, Norway has been able to maintain high overall productivity growth while also maintaining a substantial resource-oriented industry.

Oil and gas exploration will continue to be an important element in the Norwegian economy, but will have a declining contribution to growth going forward. Fiscal policy leeway will gradually shrink, not least due to the imminent demographic shift from a young to an aging population. Norway is therefore at a turning point. New growth deriving primarily from new industries is required – a shift from a resource-based economy to a knowledge economy.

All resource-based economies face this challenge sooner or later. International experience shows that the transition is demanding. Resource-based growth results not only in industrial downsizing, but may also weaken incentives to engage in education and innovation. The Commission regards the low efficiency and low completion in the Norwegian education system, and the low innovation level in the business sector, to be results of the resource-based economy. These deficiencies render Norway less well-equipped to achieve future growth.

Future productivity growth is highly uncertain. The Productivity Commission believes that the authorities must prepare for a situation of low productivity growth. By implementing several of the Commission's proposed measures, productivity can be increased. There is no doubt that the Norwegian economy offers considerable potential for efficiency gains and the development of greater sustainability. In its previous report, the Commission identified several areas in which productivity could be improved. In this report, the Commission has concentrated on long-term productivity growth, examining three particular areas: research, innovation and adoption; the labour market in transition; and the role of the public sector.

The most important condition for productivity is the knowledge level of the population. The industries of the future will increasingly be knowledge-based, and knowledge provides a foundation for corporate innovation through improved organisational models, technology, products and services. Innovation must exploit international technological developments, and demands world-class skills.

The Commission has given particular consideration to knowledge production and its interplay with the business sector. The education systems most important contribution to growth is to supply the labour market with thoroughly trained candidates. In this respect, Norway's relatively small number of Masters and Doctoral students is a challenge. Moreover, higher education is skewed towards the social sciences and humanities due to incentives in the funding system. As a result, Norway has a very low proportion of persons with scientific and technological qualifications.

Although the quality of Norwegian research has improved in recent years, Norway is not yet among the top research nations. Universities and the Research Council of Norway are concentrating increasingly on competitive arenas and publication quality, with success. However, the Norwegian research system remains subject to extensive political skewing towards broad social objectives. At the same time, Norway is largely failing to shift resources from poor to good research groups – within and between institutions. Norway has no world-class universities, and there is a strong need for more stringent research quality requirements. The

university and universitycollege funding system must give institutions greater incentives to produce research of high scientific quality. In the Commission's view, this will be difficult to achieve through the current formulaic funding allocation system. Peer review must be an essential element in any system with a strong emphasis on quality.

Businesses have to exploit global knowledge to compete in international markets. The top performing businesses in Norway already do so, but overall Norway scores low on innovation and entrepreneurship. This offers great potential to improve the exploitation of technology, particularly in service industries, which account for much of Norway's employment but currently feature little competition and internationalisation. There is a connection between social and business development. Proper organisation of attractive cities strengthens competitiveness in the fight for cutting-edge expertise and the most advanced businesses.

The development of new, internationally competitive industries demands refinement of innovation policies. Norway's research sector must be open and internationally competitive, not shielded from competition as it is today. The internationalisation of the business sector must continue, and more foreign competition must be permitted in Norway. Stronger private ownership is required to make better use of research-based knowledge. Many Norwegian businesses are owned by the State. Private ownership can be strengthened by concentrating state ownership. Taxation neutrality is important to avert incorrect allocation of capital and labour. Norway's low taxation of real estate distorts competition and impacts negatively on the investment and ownership vital to the development of a knowledge economy.

The shift to knowledge-based growth will entail substantial changes to working life, not least due to concurrent pressure from increasing globalisation, ever more rapid technological advances and immigrant and refugee inflows. Reliable organisation and constructive employer-employee collaboration are important conditions for a successful shift. New internationally competitive businesses, particularly in technological and other knowledge-intensive sectors, will need stronger skills. Labour market mobility must be improved to allow talent to be developed and employed optimally. New solutions to link labour supply with demand can improve labour market efficiency. Regulations which lock in labour must be phased out. Business policy and regulations must promote, not hinder, adjustment.

Norway faces major demographic changes in the years and decades ahead. An aging population and steadily rising life expectancy will increase the dependency burden and raise public expenditure on pensions, health services and geriatric care. To maintain a high welfare standard in the future, Norway needs to ensure that labour input is as high as possible.

The Commission considers that these demographic changes cannot be reconciled with high labour market exclusion. The necessary changes must be secured by designing a welfare system that encourages labour force participation, an education system which develops relevant skills, and labour market policy and regulations which ensure adaptability among both workers and businesses.

Welfare services must be given a stronger activity focus. Particular consideration should be given to work assessment allowance and sickness benefits, given that Norway has a high rate of sick leave and that the introduction of work assessment allowance does not appear to have reduced the duration of sickness absence. The Commission is of the opinion that employers should share financial responsibility for longer-term sickness leave.

Petroleum revenues have been used to expand the public administration and public services and fund public welfare schemes. One out of three employed persons now works in the public sector, and public expenditure amounts to more than 50 per cent of value added in the mainland economy. Rising staffing levels in ministries and central directorate units are increasing bureaucracy, and this is spreading to the rest of the public administration. The public sector needs to be reorganised to reduce bureaucracy and improve performance monitoring. The large availability of funding has delayed reforms. Task division at regional level must be revised to address the fact that sectorisation and organisational structures are hindering efficient cooperation between central and local government. Local government reform may help pave the way for improved cooperation.

In its first report, the Commission published material illustrating inefficient resource use in the public sector. International comparisons and efficiency studies on public undertakings show considerable potential for improving resource use. The most prominent is high resource use and only average results in the education sector compared to other countries. National studies of hospitals, university colleges and universities, the police, local government, etc. in Norway have revealed marked differences and shown that successful implementation of best practice could secure sizable efficiency gains. Since large swathes of the public sector are protected against competition, the incentives to make efficient use of resources are far weaker than in the private sector. The Commission takes the view that stricter, more clearly prioritised objectives must be adopted for public institutions. In addition, institutions must be given leeway to discontinue lower-priority activities and reassign resources to the best activities. Individual agencies must take part in the gains from efficiency measures, such as digitisation.

The public administration purchases goods and services from the private sector for well over NOK 400 billion a year. Procurement processes require

considerable resources. Analyses indicate that substantial resources can be saved by improving the efficiency in these processes. Better use must also be made of development and innovation opportunities. The Commission considers that the Public Procurement Act needs to be simplified, both to eliminate unnecessary administrative processes and to promote high-utility procurements. The purpose of the Act should be to promote efficient resource use. Other social objectives are best served by dedicated policy instruments, and the Commission is therefore of the opinion that the procurement rules should not incorporate supplementary requirements unrelated to the field of procurement.

Large-scale social gains can be made by increasing digitisation throughout society, and steps must be taken to facilitate digital infrastructure. This also applies to public undertakings, for which new technology promises large efficiency gains. Better interaction is required between public ICT systems, and public information management must be better coordinated, including in the local government sector. Stronger coordinating bodies are required, with mandates which cut across undertakings and administrative levels. Clear, binding instructions must be given to ensure that gains, such as better public services and lower public-sector costs, are identified and realised. Too many public ICT projects have suffered delays and large cost overruns. Better management, increased budget commitments in terms of costs and gains, and more step-by-step development of ICT systems should improve results over time.

The Commission's first report emphasised the need to secure sufficiently broad political support for major reforms. Clear communication with groups particularly affected by reforms is important. The potential socioeconomic gains, and the potential cost of unsuccessful reforms, are substantial. However, there is no shortage of reports or analyses examining necessary steps in a number of areas in which the Commission has proposed measures. Policy needs to be based on a longer-term perspective, and requires a stronger focus on achievable results. Tighter budgets will also necessitate tougher priority-setting and creative destruction in the public sector.

Norway is at a turning point which challenges growth and the sustainability of public finances. The primary answer is higher productivity growth.