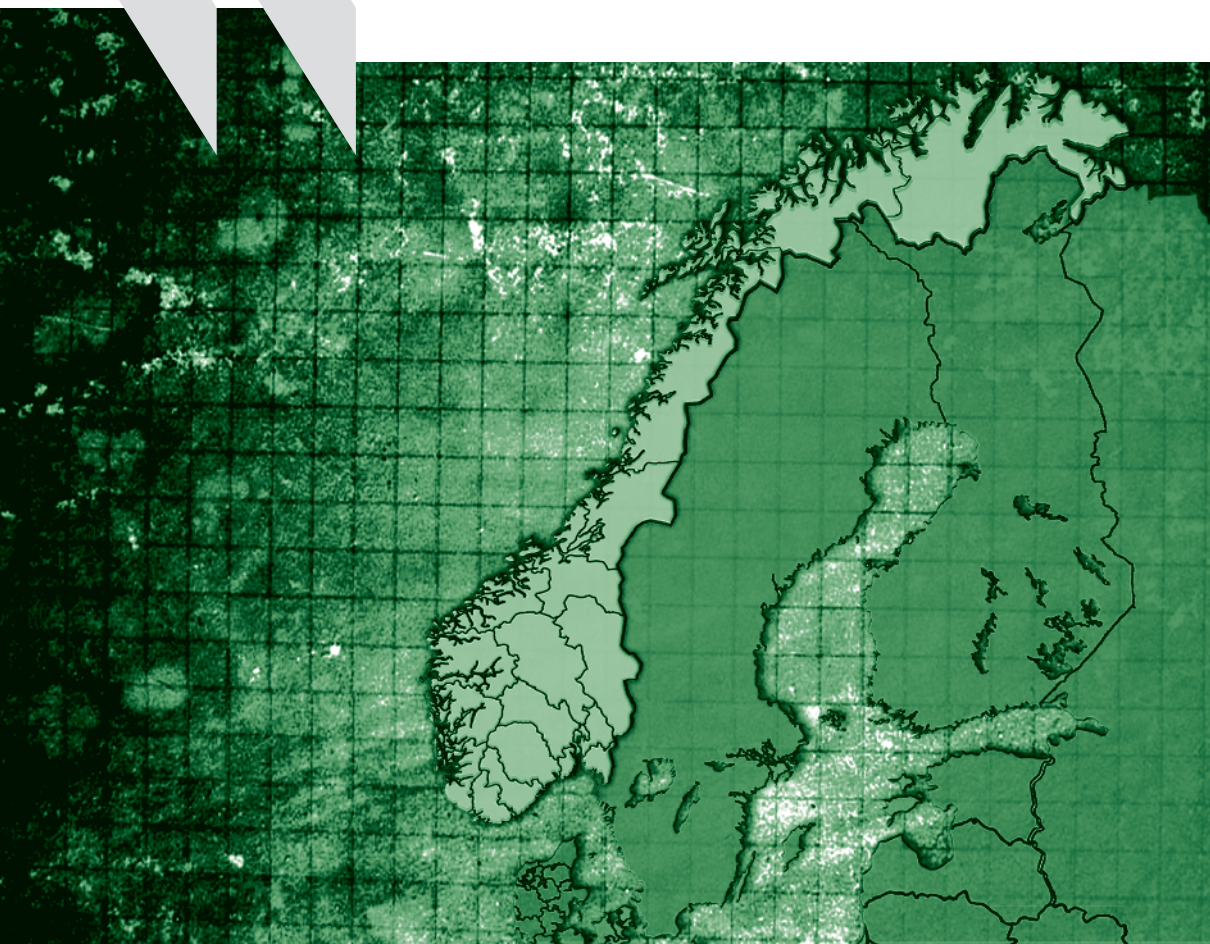




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Assessment and Recommendations

Good economic performances sustain support to areas losing population

Norway has successfully developed a resource based economy (hydroelectricity, petroleum, fisheries, agriculture) and is also competitive in specific sectors on the world market (light metals, automotive parts, maritime) thanks to improved productivity and innovation. Sound macroeconomic policies have kept inflation under control, with the fiscal earnings of petroleum and gas exploitation going into a Pension Fund contributing to reduce the impact of increased ageing. The country has enjoyed steady growth since the beginning of the nineties (3% per year between 1991 and 2003) and in terms of GDP per capita, it ranks third in the OECD, only behind Luxembourg and the United States. This favourable context has made it easier for successive governments to pursue regional development policies and programmes comprising a strong bias in favour of remote rural areas and the north of the country (district policy) where climate, distance and very low population densities bring forward issues of market access but also of public service delivery. Despite these proactive policies, around half of Norwegian municipalities experienced population decline in the decades following the mid-1980s, with inward migration towards Oslo and major cities in the south.

The “Nordic model” pursues both equity and competitiveness concerns

These specific challenges exist in other countries of northern latitudes (Finland, Sweden and Canada) but also in a country such as Australia featuring very sparse settlement patterns in large territories. Can regional development policy correct these imbalances by better leveraging local assets in all parts of the country? Which type of measures, programmes and mechanisms can contribute to strengthen entrepreneurship in rural and remote areas where most firms are small and operate in traditional sectors? Which governance framework seems best adapted to pick up these major challenges? The so called “Nordic model”, based on pursuing both equity and competitiveness concerns,

with the assumption that they are mutually reinforcing is an implicit policy reference. Are overall objectives attained on this basis and is implementation impaired in certain cases? Can municipalities with very large territories and sparse population continue to adequately fulfil their role in economic development and service provision today? Up to what point can Norway be further inspired by other models, insofar as its strong natural resource base and its unique geographical features (a country stretched over more than 2 000 kilometres with numerous natural barriers to communication) offer opportunities and constraints that can require specific solutions?

Maintaining the main features of the settlement pattern is a permanent objective

Despite several historical phases, Norwegian regional policy is mainly characterised by a strong redistributive character. It has evolved since the post-war period, with initial focus on the North (North Norway Plan, 1951) that had suffered great devastation. A regional development fund was set up in 1961 and equal service provision in all parts of the country became a permanent policy goal. In the mid-1970s bottom-up approaches began to be encouraged, followed in the mid-1980s and into the 1990s by a more market-oriented perspective, in order to make the most of the potential in all regions. Important steps were taken in 2003 and 2004, with the devolution of economic development budgets from the Ministry of Local Government and Regional Development to the county councils and the creation of Innovation Norway, by regrouping of several state agencies thus ensuring the regional presence of a major national level actor. A White Paper released mid-2005 recalled the objective of maintaining the main features of the settlement pattern while recognising that policy initiatives to achieve regional policy goals should also strengthen Norway's international competitiveness.

Policy instruments mainly target sparsely populated areas, with emphasis on service delivery and competitiveness

The more recent period has seen a renewed emphasis on the specific requirements of peripheral areas and the creation of a "Government sub-committee on rural and regional policy" at the end of 2005, followed by the publication of a White Paper on regional policy mid-2006, underlining the continued need for strong support measures in the most sparsely populated areas. Urban policy concerns, aiming cities of different sizes, are also beginning to emerge with recent measures including a newly presented White Paper on the Capital Region which focuses in particular on governance and

competitiveness issues. Regional policy in Norway thus comprises over time both support for peripheral and declining areas and competitiveness in all regions, while ensuring public service provision in all parts of the country. In pursuing and seeking to conciliate these different goals, the following characteristics have emerged.

- Policy for peripheral and declining areas distinguishes instruments targeting all sparsely populated areas from those that are specific to the North.
- Regional competitiveness policies, based on cluster-type approaches or entrepreneurship, strive to promote innovation across sectors both in major urban centres and in rural areas.
- Service delivery in areas with population decline is ensured through strong fiscal equalisation mechanisms, to maintain accessibility and quality of service based on national standards but innovative service delivery approaches are also pursued.
- The governance framework is one of increasing decentralisation but retaining strong features of power sharing between levels of government that require adequate co-ordination.

Policies for peripheral and declining areas

Measures are based on employment-oriented fiscal mechanisms and service delivery equalisation

Policy measures in favour of peripheral and declining areas are largely based on the automatic application of pre-defined fiscal and grant mechanisms in favour of firms present in zones defined by objective economic, demographic and geographical indicators highlighting strong handicaps in terms of accessibility, low population density and depopulation. Differentiated social security contributions constitute since 1975 a form of permanent aid to firms so as to favour employment in targeted regions. Lower rates to gross salary payments, between 0 to 10.6%, as compared to 14.1% in non-aided areas for 2007-2013, are applied. This is completed by modulation of investment aid levels, favouring most difficult areas as well, with ceilings of 35% for small firms, 25% for medium-sized enterprises and 15% for big companies. Both mechanisms apply in areas spread all over Norway, covering 25% of the population, in many cases with densities below or only slightly above two inhabitants per km².

Diagnosis of regional competitiveness advantages could improve the design of policy tools

North Norway (the three counties of Nordland, Troms and Finnmark) receives additional attention by the application of tailored measures and a large share of regional aid spending (two-fifths in 2006). Specific measures are the North Norway Grant aiming to enhance the quality of public services, allocations or tax exemptions, in particular for individuals, in the smaller “Action Zone of North Troms and Finnmark”, where business support within the dedicated NT programme also applies. Measures in favour of peripheral and declining areas in general and North Norway in particular are established on the basis of a wide policy consensus for support of a compensatory nature from the national level implying important flows of funds stemming from fiscal revenue generated elsewhere. This might explain why evaluation of the effectiveness of these measures has not been a priority policy issue. New concerns about economic competitiveness in the context of regional reform suggest the following holistic approach.

- Better link policies aimed at equity and competitiveness objectives, in order to assess the assumption that growth and welfare are mutually linked, so that a region wide vision of development effectively promoting synergies can emerge.
- Establish at the national level a diagnosis of regional competitiveness advantages, based on local resources, amenities and know-how.
- Empower Regional Councils with the task of defining a comprehensive and tailored regional economic and social development strategy enhancing present regional development plans (financed by the Ministry of Local Government and Regional Development), by effective and complying integration of sector concerns, along a model developed in many European countries and stimulated by the Structural Funds.
- Create regional development funds with significant resources that would provide regions with allocations to co-finance strategic initiatives with sector ministries.
- Consider the progressive introduction of performance-based incentive mechanisms so that the most dynamic municipalities seeking to capitalise on local assets can be rewarded for higher degrees of local initiative.

Competitiveness and innovation policies

Regional innovation and competitiveness policies involve a wide array of actors

The situation of Norway in terms of innovation and competitiveness can be characterised by a paradox: innovation levels are relatively low but productivity is high. Innovation tends to be adopted through non endogenous innovative processes and products rather than in-house developments. R&D expenditure levels, particularly from private sources, remain low as compared to OECD averages. Also, regional competitiveness policies are characterised by a wide array of tools for different contexts, from remote rural areas to highly sophisticated urban knowledge environments. The main actors are Innovation Norway (operating under the main responsibility of the Ministry of Trade and Industry but also largely funded by the Ministry of Local Government and Regional Development), RCN (The Research Council of Norway, under responsibility of the Ministry of Education and Research) and SIVA, the Industrial Development Corporation of Norway, with important and strategic ownership interests in business parks and incubators. Can these policies foster effective regional competitiveness, including in areas where critical mass, easy market access and adequate manpower are lacking?

The role of major urban areas in knowledge production and diffusion should be better considered

The innovation system is confronted with the difficult task of tapping very diverse regional contexts: a dynamic capital city area and a few university cities; rural and peripheral areas; and the particular case of North Norway. The country thus disposes of a high level knowledge base concentrated in the capital city area and in the other university cities (Bergen, Trondheim, Stavanger and Tromsø), with a closely knit network of university colleges present in all counties. These institutions co-operate with the private sector even if systematic regional development goals are not pursued in the absence of a comprehensive policy framework to that end. Norway has world renowned expertise in the marine and maritime fields and in fish-farming and seafood, with strong clusters developed in these areas. Other efficient clusters exist in the light metal industry and in ICTs. Cluster policy aims to comfort these strong points through programmes such as the Norwegian Centres of Expertise (NCE) while developing clusters in new areas such as bio-tech. Most evaluations recognise the soundness of these policies but underline still great fragmentation in spite of recent efforts to reduce the number of tools, with frequent overlaps. It remains to be seen whether this necessary

clarification will lift ambiguities between the role of major urban centres vying for international prominence and that of other areas where innovation and competitiveness are sought at a smaller scale, usually in SMEs operating in traditional sectors.

Recent emphasis on city attractiveness and competitiveness, particularly in Oslo, create the basis for an explicit urban policy

- The main urban structure of Norway comprises, besides Oslo, three other cities with more than 100 000 inhabitants, also located in the south of the country, as compared to Tromsø, the biggest urban settlement in the north, with less than 64 000 inhabitants in 2006. All of these urban areas and other cities in the south are growing, with in-migration from sparsely settled areas in different parts of the country. These urban areas are home to major clusters that bring significant contributions to national GDP (four NUTS 3 regions account for half of national GDP in 2003, excluding offshore activities, with the capital region alone representing 22%) but only Oslo, with a metropolitan area of more than 1 200 000 inhabitants, enjoys international status. Contrary to many countries, Norway has no explicit urban policy *per se*, but new environmental and immigration concerns, particularly in the Oslo area, are getting more focused, bringing into light issues of city competitiveness that regional policy does not yet specifically address. Innovation can play a strong role in this area and efforts such as those engaged by the private sector within Oslo Teknopol require national level support following a partnership approach. District policy aims need however to be taken into account, lest new measures in favour of major urban areas contradict policies aiming to stem internal migration flows.

The role of small and medium-sized cities needs to be better integrated into regional innovation strategies

- Rural areas represent an important proportion of Norwegian territory: the investment aid map covers around 86% of the land mass and comprises two-thirds of municipalities regrouping approximately 27.5% of the population. These areas share features of lower educational attainments, out migration, ageing and higher levels of public sector employment. They receive high grant amounts per capita to ensure public service delivery and tax breaks for firms to sustain economic activity. Counties with strong rural features receive targeted funding. Innovation in local businesses is actively pursued by the public agencies mentioned above by use of specific

infrastructure and policy tools aiming rural areas. This diversity of measures has contributed towards creating equal living conditions in different parts of the country by compensating handicaps of different kinds. However, it appears difficult to measure the impact of these policies on competitiveness since benchmarking is not systematically organised. The role of small and medium-sized cities in the development of these areas has only been highlighted recently by new programmes but these are not yet fully integrated into regional plans.

Tromsø University is an asset for North Norway but stronger interregional co-operation and networking could further its impact

- North Norway covers one-third of Norway's mainland area but represents only 10% of the population. Innovation activity in the three counties of Nordland, Troms and Finnmark are amongst the lowest in the country but the knowledge base developed around the University of Tromsø is growing, open to specialisations and firms linked to polar conditions. Many programmes seek to comfort these positive trends, perceived as strategic for the future, as these appear to be the only way of retaining young people. A certain measure of success has been achieved in the health sector, with most students staying on as practitioners after graduation and the creation of a centre for telemedicine with national status. Although the impact of the University is being felt in the three counties, increased co-operation between the regional councils could usefully help to develop networks and partnerships with the private sector. This would also provide a stronger base for promotion abroad and internationalisation of activities.

Place-based policy approaches can enhance the impact of regional competitiveness and innovation policies

The review of regional competitiveness policies in Norway and their application to different geographical and economic contexts suggest a certain number of recommendations to improve their efficiency, beginning with the definition of a strategic vision for regional innovation at the national level encompassing components developed rather distinctly up to now. The recommendations are the following:

- Bring together global concerns and regional development priorities by increased co-operation between the main actors at the national level, possibly by creating a high level committee including the scientific community and the private sector.

- Compare the efficiency and effectiveness of different tools in order to simplify policy delivery.
- Ensure co-ordination with the regional level by mandatory innovation strategies in regions integrated into national priorities.
- Plan a strong innovation component within urban policy, based on incentives for developing intercity networking, including small and medium-sized cities, between firms, universities and research institutions.
- Concentrate entrepreneurship and innovation measures in favour of peripheral and rural areas so that the infrastructure for business development is used more efficiently, by emphasis on soft measures such as training, with the aim of increasing local absorption capacity.
- Integrate such incentives systematically into innovation programmes for North Norway, in particular to support joint investment and tourism promotion by the three counties abroad.

Public service delivery in areas of population decline

Depopulation and ageing in more than half of Norwegian municipalities impact the cost of services

Depopulation trends, with strong impact on service provision, continued over the last decade: 228 municipalities out of 431 experienced negative population growth from 1997 to 2006. Private services like small grocery shops are disappearing, remaining present only in central parts of municipalities. Public services in areas of population decline are however rather well assured, but at a high cost for the national budget, aiming to compensate additional expenditure to service a dwindling population. In this context, municipalities are free to organise public service delivery as they deem best fit, on the basis of a largely block grant system, as long as they respect the ratios and quality requirements defined by the national level. In small municipalities with a declining and ageing population, health care expenditure tends to grow at the expense of primary and lower secondary schooling expenses. The system does not seem to contain incentives or performance-based budget and management tools that would facilitate better allocation of resources and limit expenditure. The Kostra database, presenting trends in municipal budgets, however permits useful comparisons.

The 2002 hospital reform aims greater cost efficiency

Health and social care expenditure has been going up in all Norwegian municipalities as a result of ageing. Measured in per capita terms it is 50% above the OECD average. In municipalities with negative population growth, welfare expenditure represents more than 50% of the budget. Staffing costs are proportionately higher, with these small municipalities often compensating doctors for a reduced patient base and, in spite of these costly schemes, recruitment of health personnel in rural areas is a problem. Intermunicipal co-operation in these fields is limited because of the large and variable geographical dimensions of municipalities. The 2002 reform, replacing county responsibility for hospitals by regional health enterprises supervised by the Ministry of Health and Care Services, sought to increase cost efficiency while organising improved and more equal service provision across the country. Municipal health centres, flexible responses to distance, co-operate efficiently with county level hospitals.

Population decline produces concerns about school closures and staffing problems

Since 1997, 60% of school closures have been occurring in municipalities with population decline. As schools close, transportation costs covered by municipal budgets increase, while average salaries for teachers are higher. The overall cost per pupil is also higher with pupil to teacher ratios lower than in urban areas. A diminishing headcount reduces grant levels but fixed costs remain. The overall high cost of schooling in these areas and recruitment problems have triggered local projects to compensate distance and limited human resources by innovative tele-education schemes. Based on co-operative approaches between adjacent municipalities, they combine traditional teaching methods with interactive video classes. These projects are however costly, as broadband deployment in Norway is at the initiative of private operators, making it necessary for the public sector to join efforts in view of reducing expenses.

More systematic use of ICTs can further improve cost-efficiency in quality education and health services

Overall, areas of declining population enjoy accessibility to public services on the basis of ratios and quality standards applying in all parts of the country and equalisation schemes that compensate for higher per capita

costs or reduced tax bases. Additional support is even provided in peripheral areas and in North Norway, through specific grants aiming to provide a wider offering of services and even higher levels of service quality, as this participates in the attractiveness of areas seeking to retain their inhabitants. Also, Norway's broadband coverage is very high, reaching 98% of households. On the other hand service provision is becoming increasingly costly and ageing will deepen the trend, while a recruitment problem remains in many rural areas for health personnel and for teachers. Certain proposals could improve cost-efficiency while better sharing scant human resources.

- Assess in detail the supply of skilled labour for public services in areas of declining population.
- Develop support to telemedicine (training, funding) from rural health centres within a national plan for telemedicine that could be developed with Tromsø University.
- Define a tele-education scheme for rural areas capitalising on the experience of municipal initiatives for lower secondary education, to share know-how on the basis of a network approach.
- Extend entrepreneurship training in services and support to service firm creation in rural areas.

Governance framework and regional reform

An important number of responsibilities remain shared across levels of government

The Norwegian governance framework has been undergoing decentralisation since the beginning of the millennium but rather than clear cut delegation of responsibilities, power sharing, bringing up co-ordination issues, has been preferred. An example is that of counties, managing their regional development plans with funds devolved from the central level, while “County plans” bringing together activities of sector ministries used to be a separate exercise. This complexity is also reflected in the mapping of administrative boundaries, quite different from each other and far from following county limits. Also, the number of counties – 19 – could be considered as too high, in proportion of the population. The discussion of forthcoming regional reform relates precisely to the size and responsibilities of counties, the number of which might possibly be reduced.

Differing administrative boundaries and the role of the County governor require clarification

Efficient co-ordination, both at the national and regional levels and across levels of government is required for the functioning of this governance matrix. At the national level, the creation at the end of 2005 of a Government Sub-Committee on Rural and Regional Policy, chaired by the Ministry of Local Government and Regional Development bringing together seven ministries, is a positive outcome. At the regional level, differing administrative boundaries and sometimes overlapping responsibilities blur the picture. In the context of future regional reform, it seems that options as to the county governor's role are now closed: there is consensus around a model with limited powers for the state representative.

Municipalities enjoy limited fiscal autonomy and many rely on strong equalisation funding originating in urban areas

Close to 50% of municipal and county revenues are constituted by taxes. The main features are a capped level of income tax and a significant share of general purpose grants, with few conditional grants and low levels for the property tax (only 2% of municipal revenues in 2004). In big and medium-sized cities, income tax represents much higher levels than grants, whereas in small municipalities these proportions are reversed. In counties, comparative patterns can be discerned: the main revenue sources for counties in North Norway are constituted by grants from the central level, contrary to others where the income tax plays the major role. The important flows stemming from equalisation schemes, which are funded by big cities, complete the picture of a financial framework characterised by limited autonomy and automatic mechanisms in favour of small local governments with lesser revenue or facing higher costs per capita. The system contains comparative benchmarking but few incentives or new tax raising possibilities exist that would encourage local governments to develop more proactive public service or economic development strategies financed from own revenue sources.

Intermunicipal co-operation could be developed in parallel to increased staff training

If the number of regions is reduced and when regional councils receive increased powers in different areas (spatial planning, roads, the environment and innovation), can many municipalities remain at their present size (47% have less than 4 000 inhabitants) to efficiently participate in regional development

strategies? The latter will require active local government partners with adequate human resources willing to promote economic development projects fitting into wider regional networked perspectives rather than merely subsidising local businesses. Increased intermunicipal co-operation can be a solution and a first step towards amalgamation but these are few, although 30 municipalities are studying the possibility. Different incentives could be considered to better trigger the process, linking it to regional reform.

Regional and sector policies should be better integrated and regional reform objectives better explained

The recommendations that could be made in view of regional reform to be implemented in 2010 rest on the assumption that such major structural changes cannot be efficiently carried out without a clear allocation of responsibilities and resources. Also, linkages with parallel changes within other levels of government are required, so as to facilitate implementation and contribute to effective devolution. The suggested guidelines are the following.

- Ensure that the Government Sub-Committee on Rural and Regional Policy has sufficiently permanent status, staff and resources to co-ordinate policy decisions and monitor application, as obstacles requiring corrective measures can appear. The Committee should be able to check that sector strategies in counties are integrated into broad regional policy and synergies developed.
- When decentralising new responsibilities to counties, ensure that no unfunded mandates are given, by clear transfer of corresponding resources.
- Clearly associate citizens and associations in the reform process by systematic consultation and dissemination of information on the objectives of the reform to counter apparent lack of interest in regional developments, reflected by voter turnout which is lowest at the regional level.

Box 0.1. Norway basic facts and figures

The land and the people

Population: 4 681 000 (2007)

Population density: 14 inhabitants per km²

Languages: Nynorsk (New Norwegian) and Bokmal (Dano-Norwegian), with equal status.¹

Area: 324 000 km², with around 20% of productive forest and 3% devoted to agriculture.

Climate: Maximum average temperature of 16.4 centigrade in Oslo and 9.2 centigrade in Vardo (on the Barents Sea), lowest average minimum of -4.3 centigrade in Oslo and -5.4 centigrade in Vardo. In innermost northern localities like Karasjok, temperatures can reach -50 centigrade. One-third of the country lies north of the arctic circle.

Daylight: In January six hours in Oslo, polar night (sun permanently below horizon) of two months in Northern Norway and three and a half months in Svalbard, in summer close to 19 hours in Oslo, polar day (sun above horizon for 24 consecutive hours) lasting around two months and a half in the North and four months in Svalbard.

Topography: Norway is characterised by a rugged and broken mountainous landscape with many fjords, glaciers, peninsulas and coastal islands. Communication is thus difficult: many localities are more easily reached by boat and the railway network stops in Bodø.

Situation: Continental Norway, the northernmost country in Europe, spans 1 750 kilometers from north (Finnmark) to south (Vest-Agder), a distance greater than that between Oslo and Rome. It borders Russia, Finland and mostly Sweden. The Svalbard archipelago lies 650 km further north.

Governance

Independence: 7 June 1905, after having been for more than four hundred years under the domination of Denmark and a dual monarchy with Sweden since 1814.

Constitutional monarchy: a single chamber in parliament (Storting)² and two levels of elected local government (municipalities and counties).

Currency: Norwegian Kroner (NOK).

EU links: Norway remains a member of EFTA (European Free Trade Agreement), having twice refused by referenda (in 1972 and 1994) EU accession. It nonetheless maintains close ties with Europe, as signatory of the European Economic Space and Schengen agreements. The EU represents three-quarters of Norway's foreign trade.

431 municipalities: In 2006: more than half have less than 5 000 inhabitants and 13 have more than 50 000. Municipalities often form voluntary associations, governed by “regional councils” with powers in certain areas delegated by the municipalities.

19 counties,³ each with a County Council and a centrally appointed Governor co-ordinating national policy implementation. Regional offices of national administrations seldom coincide with county limits.

1. The Sami (or Lappish) people, spread over the arctic areas of Scandinavia and Russia, speak their own language. Norway is home to two thirds (approximately 45 000) of this population.
2. The Sami have their own parliament, established in Karasjok, since 1989.
3. Oslo has both municipality and county status.

Figure 0.1. **Norway and the Nordic countries**

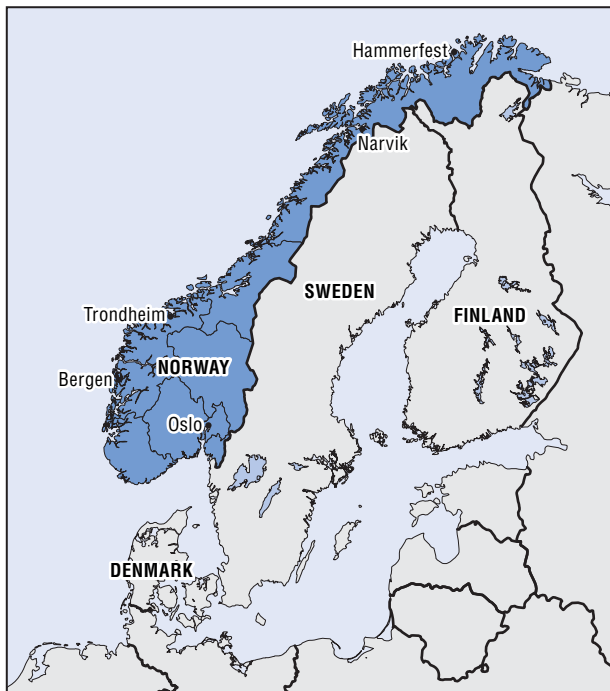


Figure 0.2. **Counties in Norway**

Source: Ministry of Local Government and Regional Development.

Chapter 1

Regional Performances and Underused Potentials

Introduction

At the turn of the 20th century, Norway's economy rested largely on the primary sector, whether fishing, agriculture or forestry. A small industrial base, located mostly in the south, and limitations imposed by nature on agricultural development limited job creation, thus leading to out-migration, in particular to North America. Prospects for the economy began to change at the end of the 19th century with the development of hydro-electric power, harnessed across the country by numerous waterfalls. Cheap electricity facilitated the expansion of metallurgical and chemical manufacturing, especially aluminium, iron alloys and fertilisers. Small cities by the fjords became central to Norwegian industry. At the same time big companies became crucial for employment and regional development in many parts of the country. In the depression after WW I, expansion in electricity production and metal industries slowed down, but became later more specialised. After WW II the state established a Norwegian Iron Works in Mo i Rana, based on regional electricity production and local iron ores. Iron from the Kiruna mines in Northern Sweden was exported from the ice free harbour of Narvik. The control of these strategic resources was a major challenge during World War II, as showed precisely by this famous battle. Their exploitation than sparked the growth of shipbuilding at the benefit of the southern part of the country.

By the middle of last century, Norway's industry was fast developing by leverage of these natural resources, while the primary sector, as in other countries was employing a diminishing share of the labour force. This led to increased urbanisation, benefiting mostly the capital city, but in spite of this pronounced trend, Norway remains today the second less urbanised Nordic country,¹ behind Finland. In 1980, 70.5% of the population was living in an urban area and 75.8% in the year 2000.² For Finland the respective figures are 59.8% and 61.1%, whereas for Denmark, the most urbanised Nordic country they stand at 83.8% and 85.1%, with Sweden trailing behind at 83.1% and 83.3%. In spite of out-migration from low density areas towards larger towns and cities, Norway, as Finland, retains strong rural features, probably reinforced by the characteristics of coastal areas geared both towards agriculture and fishing,³ particularly fish farming, for which Norway is the world leader.

Only five municipalities in Norway had a population over 100 000 at the beginning of 2006: Oslo (538 411), representing 11.6% of the country's population, Bergen (242 158), Trondheim (158 613) Stavanger (115 557) and Bærum (105 928) which is part of the built up area of the Oslo conurbation. All of these municipalities are located in the southern part of the country, where other important urban centres such as Kristiansand (76 917) and Fredrikstad (70 791) are situated. The major urban centres in the north are much smaller: Tromsø has a population of 63 596, Bodø has 44 992 inhabitants and Hammerfest only 9 361. The four largest cities represent 38% of the total urban population, whereas only 13% of the urban population resided in the 697 urban settlements below 2 000 inhabitants. Thus, slightly more than half of the Norwegian urban population resides in medium size towns and cities. More than a million (1 027 900) live in the 189 towns comprising between 2 000 and 20 000 inhabitants and close to 740 000 reside in the 15 cities ranging between 20 000 and 99 999 inhabitants (see Figure 1.1). The urban population⁴ is steadily growing: it stood at 75.8% in 2000, versus 78% at the beginning of 2006. The increase for 2005 was of 1.3%. However, the population growth rate is higher in the four largest cities than the national urban average: 1.9%, versus 1.3%.

Norway is a very sparsely populated country (14 inhabitants per km²), as compared to European averages (118 for the former EU15). This characteristic is shared with other Nordic countries: Finland (15 inhabitants per km²) and, to a lesser degree, by Sweden (20 inhabitants per km²). Only 1.4% of the area is built-up (buildings, roads and railroads) and a mere 3.2% devoted to agriculture. Almost 45% of the territory is covered by mountains or mountain plains. The settlement pattern is heavily influenced by topography (see Section 1.4.1), explaining that only 18% of all km² grid cells are populated. This hinders provision of services from centres to sparsely populated areas as well as daily commuting to the nearest town offering employment. Forty per cent of the 161 labour market regions consist of only one municipality (Juvkam, 2002). These are characterised by very low density (around 2.3 inhabitants per km²) and small size of settlements (under 2 000 inhabitants). Peripheral⁵ can therefore be regarded as synonymous with a relative lack of accessibility to economic activity, having serious impacts on regional policy.

In 2005, around one-third of Norway's municipalities (142) had no access to a centre/urban settlement with at least 2 000 inhabitants. Thus, most peripheral municipalities are still heavily dependent on the primary sector and on public sector jobs (local government and municipal services). A very low share of the population of the most peripheral municipalities lives in urban settlements (around 25%, three times lower than the national average) and the urban settlements are on average very small (around 600 inhabitants). These peripheral municipalities cover, however, more than 42% of the nation's

territory. They delimit the potential problem regions in Norway, together with approximately 70 municipalities located in more central or southerly parts, which offer rather similar features in terms of population density, settlement structure and sizes, distances/remoteness and industrial base/labour markets.

Figure 1.1. **Settlement patterns in Norway**

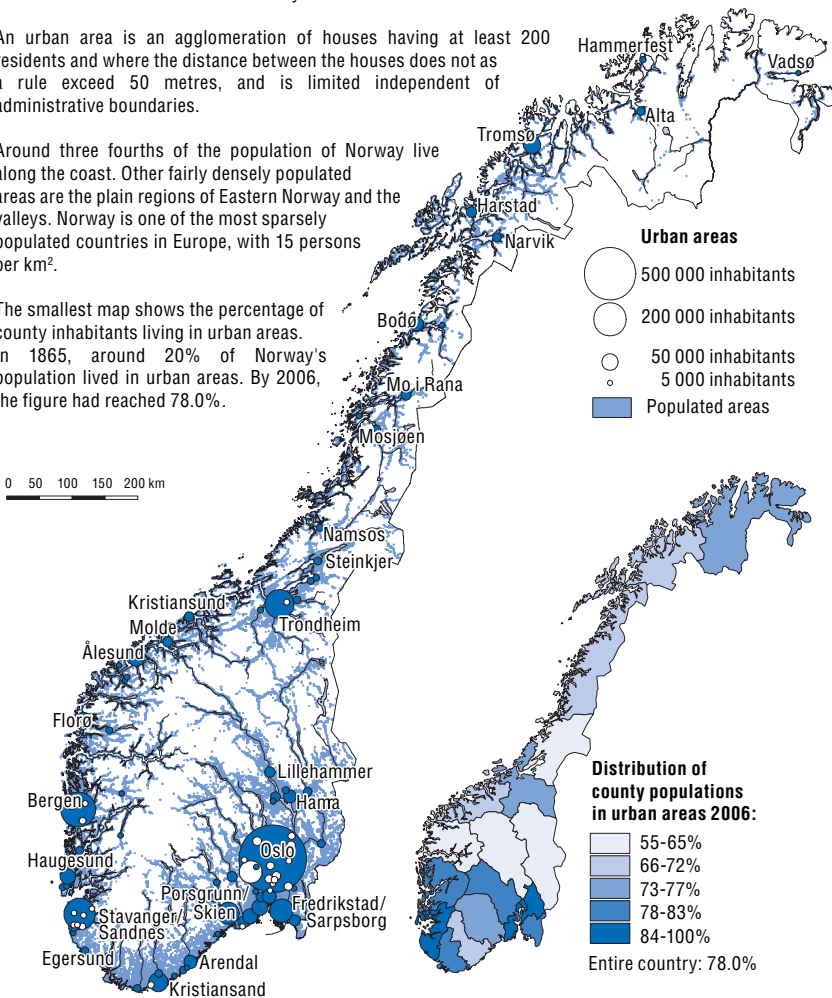
V. Settlement

The map shows populated areas and the number of inhabitants in major urban areas as of 1 January 2006. Urban areas with 5 000 or more inhabitants are shown with circles on the map. Oslo, the largest urban area, has 825 105 inhabitants as of 1 January 2006.

An urban area is an agglomeration of houses having at least 200 residents and where the distance between the houses does not as a rule exceed 50 metres, and is limited independent of administrative boundaries.

Around three fourths of the population of Norway live along the coast. Other fairly densely populated areas are the plain regions of Eastern Norway and the valleys. Norway is one of the most sparsely populated countries in Europe, with 15 persons per km².

The smallest map shows the percentage of county inhabitants living in urban areas. In 1865, around 20% of Norway's population lived in urban areas. By 2006, the figure had reached 78.0%.



Source: Statistics Norway.

1.1. Major demographic and economic trends

1.1.1. Spatial and demographic shifts

The spatial trends that have been dominant for the last 50-60 years in Norway may be characterised as “geographical centralisation”, occurring in three directions: from rural to urban areas, from the north to the south, and from inland to the coast. The main trends of continuous urban growth were especially strong in the 1950s and 1960s and during the last two decades of the previous century. Migration during those periods was extremely sensitive to business cycles. Negative business cycles usually postponed and “stored” potentially centralising interregional migration, while the intraregional migration continued. In positive business cycle turns, centralising interregional migration streams (notably from the north and inner parts of the country to southern and partly south-western parts of the country) accelerated. In parallel, fertility decline began first in the southern/central part of the country, with the more remote, especially north coastal areas, starting later but declining faster than the central parts.

Around half of Norwegian municipalities experienced population decline in the decades following the mid-1980s, with population centralisation a significant trend at all territorial levels. The consequences have been that the least central municipalities have in average a gross overrepresentation of the age-groups above 60 years of age, and this feature increases in the higher age segments. Conversely, persons between 20 and 40 years of age are strongly under-represented in the same type of municipalities. This pattern, along with a general “thinning-out” of the population base, has a bearing on reproductive potential and economic vitality and sustainability, while creating problems in service provision in many communities in different parts of the country required adapting to the needs of a fast ageing population.

Centralisation was to a large extent influenced by technological development and increased international competition in product, capital and labour markets. Employment and population developed in parallel in the areas benefiting from these trends: job seekers migrated to areas where jobs were available while new job creation was spurred by population growth. On one hand, private services and state-service jobs are significantly overrepresented in the approximately 100 municipalities of the largest urban areas. On the other hand, the primary sector, and to a certain degree the manufacturing industry and municipal services are significantly overrepresented in the 142 most rural and less central municipalities. Such contrasting features show that lagging regions are those that have been subject to depopulation over a long period. On a local scale such regions are found in all parts of the country. On a regional scale, however, North Norway is the only main region with population loss (-0.9%)

during the period 1994-2004, whereas the most populous South-East region (Oslo), enjoyed a 7.5% rate of demographic growth.

1.1.2. Urban growth trends

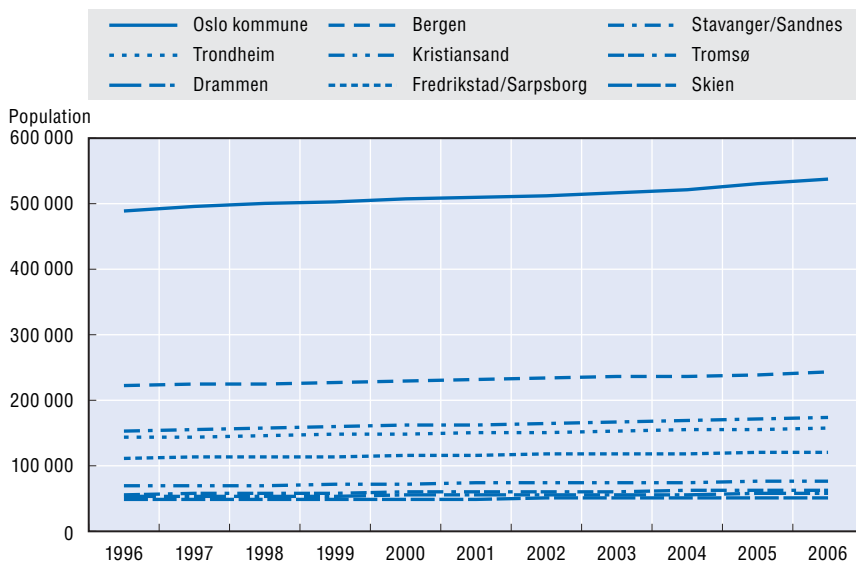
Norway is not a highly urbanised country by European standards: only five municipalities have a population exceeding 100 000 in 2006, with the population of the municipality containing Oslo (close to 540 000) representing itself more than double that of Bergen's municipality (242 000), the second largest city in Norway.

The following developments aim to analyse demographic growth in nine Norwegian core cities (municipalities)⁶ eight of which are located in the southern part of the country, with only Tromsø, the smallest (63 596 in January 2006), located in the North. The core cities will be compared between each other; their labour regions will also be compared between each other. The results will then strive to find out if there is any dominant pattern between urban core growth and labour region growth. In the case of Oslo, the same type of comparisons will be made, taking into account not only the labour region but also the "City-Region"⁷ (46 municipalities) and the Oslo Alliance (56 municipalities), a grouping of municipalities seeking to cooperate at the level of a wider *de facto* metropolitan area. The latest population data is that of January 2006 and the time period covers 10 years since 1996.

From the perspective of the core cities, the absolute growth figures over the period are indicated in Figure 1.2 below. The highest growth rates were registered over the period in Stavanger-Sandnes, the petroleum industry capital of Norway (more than 1.20% on average per year) and in Tromsø (close to 1.20%). Only Kristiansand also stays above 1% (see Figure 1.3). When looking at the two five-year time sequences, the picture changes somewhat. It shows that since 2001, strongest growth has been registered again in Stavanger-Sandnes (close to 1.40%) but also in Oslo (1.15%). On the other hand growth has somewhat slowed down in several cities, including Tromsø, during the most recent period (Figure 1.3).

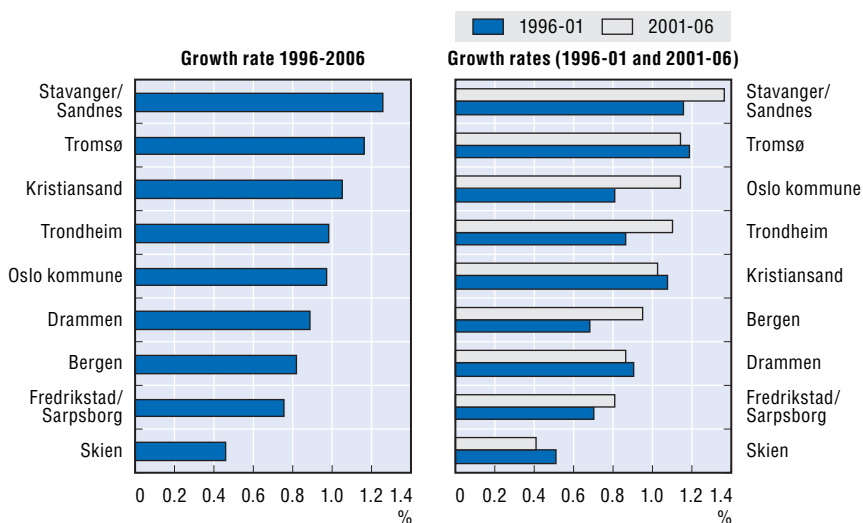
Population growth in labour regions in absolute figures is presented in Figure 1.4. It can be observed that the curve is very similar to that of the core city. Looking at the annual growth rates represented by these figures (Figure 1.5), it appears that the Stavanger-Sandnes area boasts the highest rate at over 1.2%, followed by Oslo at 1.1% and Tromsø at slightly more than 1% over the period 1996-2006. When looking only at the last five years, the strongest growth trends are registered in Bergen, followed by Trondheim and Stavanger, with the Oslo area only in fifth position. How can the slower growth registered in the Oslo labour region in the most recent period be explained? The trend is too recent and covers a very short period, so only hypotheses can be put forward: urban congestion and increasing disparities between its

Figure 1.2. **Population growth of major cities-municipalities in Norway, 1996-2006**



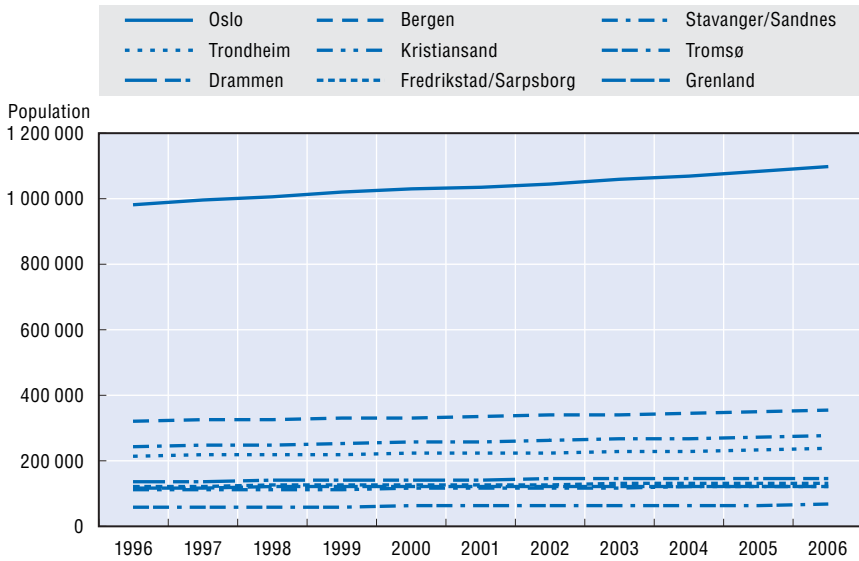
Source: Statistics Norway.

Figure 1.3. **Annual demographic growth rates in major Norwegian cities-municipalities, 1996-2006**



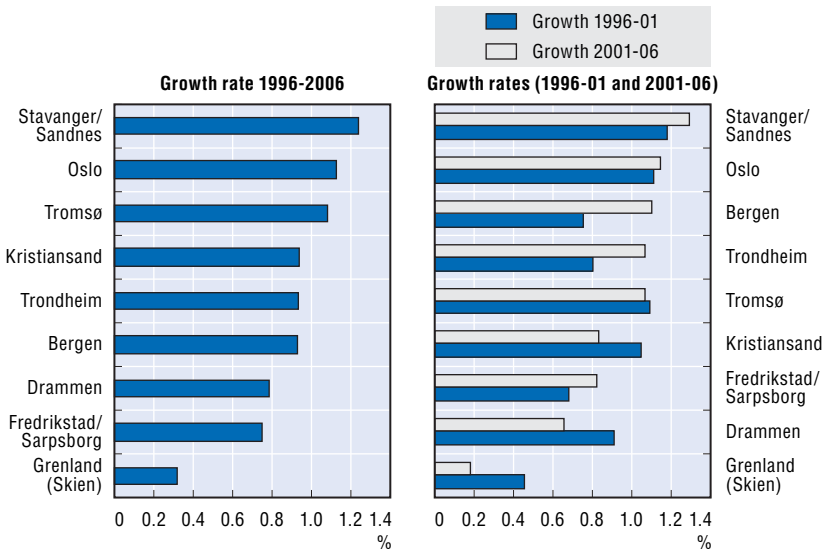
Source: Statistics Norway.

Figure 1.4. **Population growth of nine labour regions in Norway, 1996-2006**



Source: Ministry of Local Government and Regional Development.

Figure 1.5. **Nine labour regions' annual demographic growth rates, 1996-2001**



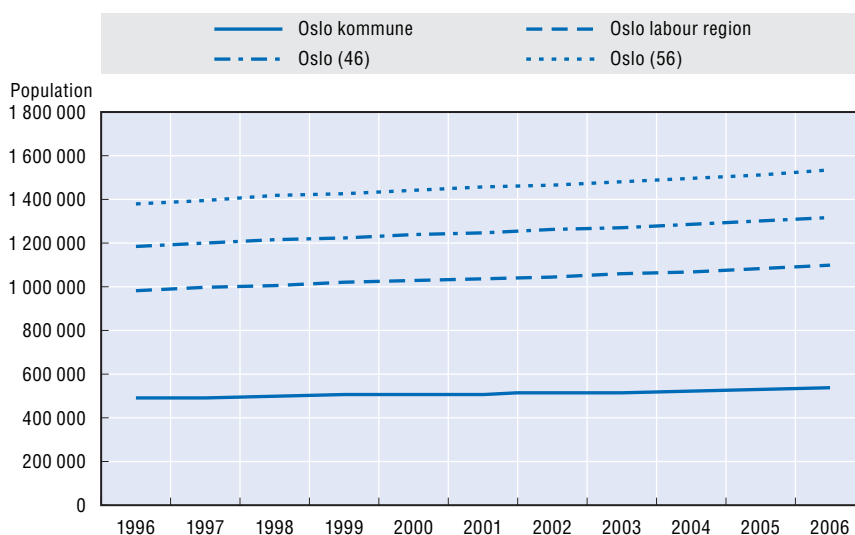
Source: Ministry of Local Government and Regional Development.

different parts, due in particular to difficulties in integration of immigrants, possibly rendering the area less attractive for firms.

Comparing the respective demographic growth of the core cities and their labour market areas, there is stronger growth for the labour region as a whole than for the city itself only in the case of Bergen and Oslo. In the case of Oslo, as in most capital cities, this can be attributed to a mix of factors: higher rents in the centre, congestion, pollution, but also establishment and growth of new businesses and clusters in the wider labour market area. In all the other cities, the growth rates of the core city and the labour region remain somewhat similar although there are in some cases like Tromsø slight differences in favour of the centre. In the latter case, lower population density, including in the centre municipality, can explain that the attractiveness of surrounding areas is not markedly more pronounced than that of the urban core.

Lastly, compared growth in absolute terms in the capital city region, based on the capital city municipality, the labour market region, the city region and the wider Oslo Alliance area are indicated in Figure 1.6 below. Observation of these developments in terms of growth rates over the last ten years (Figure 1.7) present the following findings: the capital city municipality grew at a slower pace (less than 1%) than all the surrounding areas, with the strongest growth occurring in the labour market region (around 1.12% per year), showing that major economic activity and places of residence are located in this first central outer ring. The Oslo city region registers a score of around 1.8% as compared to 1.3% for the wider Oslo Alliance group. Here again, as distance from the centre grows, economic activity and population densities tend to thin out. When observing developments over the last

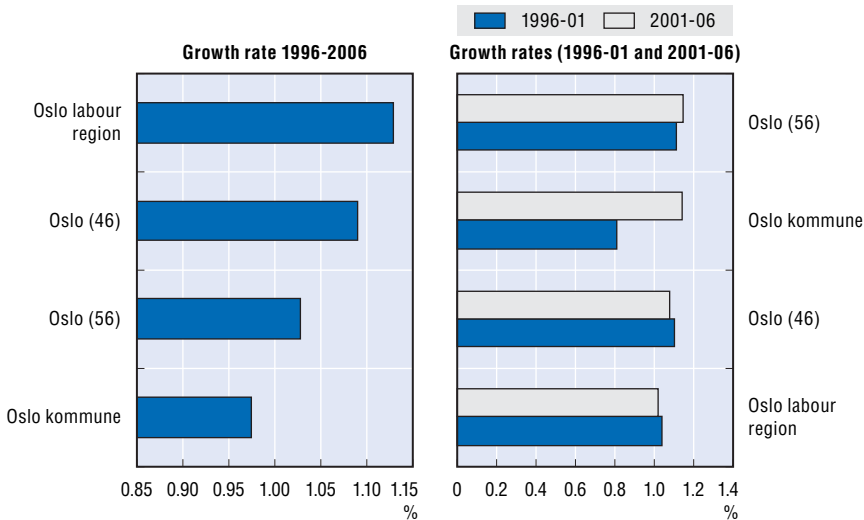
Figure 1.6. **Population growth in Oslo and surrounding regions, 1996-2006**



Source: Statistics Norway and Ministry of Local Government and Regional Development.

five years only (Figure 1.7), the population of the Oslo municipality has grown far faster than during the preceding period (1.18% as compared to 0.80%). Conversely all the other territories register comparable or lower paces of growth over the last five years as compared to the previous five-year period. It is possible that this translates the recent influx of immigrants into parts of the city centre.

Figure 1.7. **Annual demographic growth rates in Oslo and surrounding regions, 1996-2001**

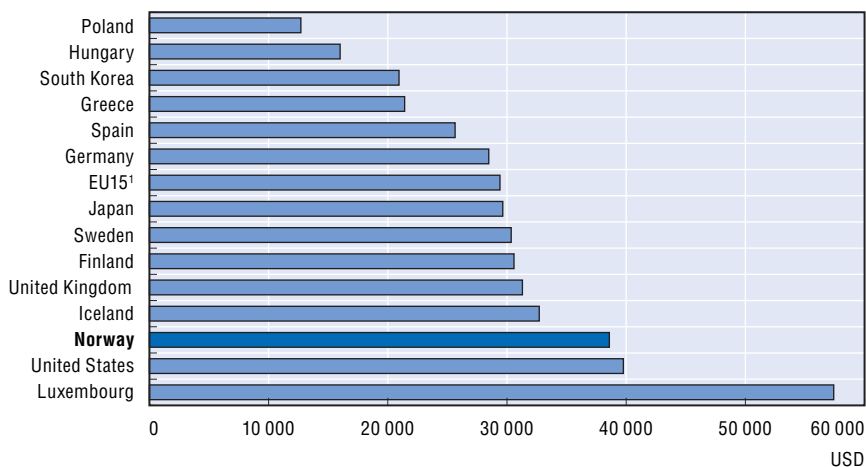


Source: Statistics Norway and Ministry of Local Government and Regional Development.

1.1.3. Structural changes in the economy

Norway has enjoyed a steady growth in GDP since the beginning of the 1990s, with an average growth rate of more than 3% between 1991 and 2003 which places it a good measure above the OECD average of 2.5% (OECD, 2005d). Norway ranks in the 8th position amongst OECD countries, behind Ireland, Luxembourg; Korea, Australia and three central European countries. This good performance is of course linked to the surge of the petroleum economy in Norway (see below). In terms of GDP per capita, in 2004, Norway held the third position in the world, behind Luxembourg and the United States (see Figure 1.8).

In Norway, the share of employment in agriculture and industry has been steadily declining. Agriculture employed 5.3% of the workforce in 1994 and ten years later this percentage had dropped to 3.5%. For industry, the respective figures are 23.4% and 20.9%.⁸ Conversely, the service sector jumped over this decade from 71.3% to 75.6% (OECD in Figures 2005). These trends that

Figure 1.8. **Gross domestic product per capita, selected countries, 2004**

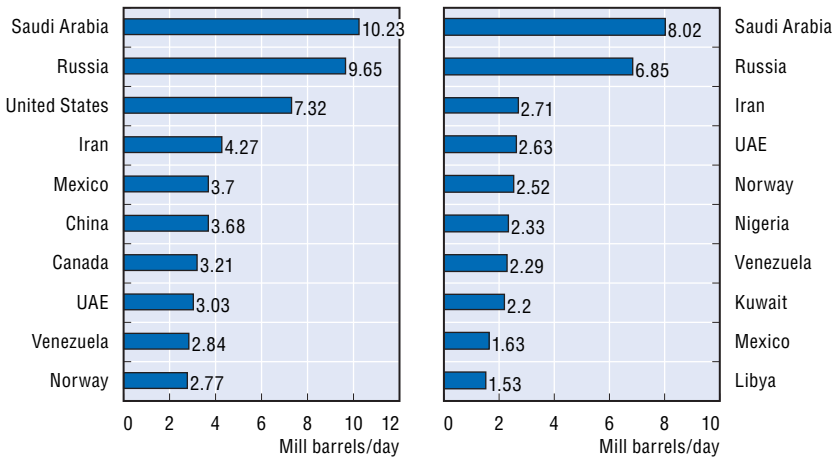
1. EU member countries through 1 May 2004.

Source: OECD in Figures 2005 – GDP Table.

are typical of many countries, tend to dissimulate the major changes that the Norwegian economy has undergone over the 1990s, on the basis of the build-up of exploitation of the gas and petroleum resources lying in the North Sea and in the Norwegian Sea, with production now beginning in the Barents Sea (“Snow White” field), considered to contain huge petroleum reserves. As indicated below, the exploitation of these natural resources now represents a very significant share of the Norwegian economy, although the impact in terms of employment so far is relatively limited.

Petroleum and impact on other sectors

Norway was in 2006 the world’s fifth largest exporter of oil (including NGL and condensate) behind Saudi Arabia, Russia, Iran and the United Arab Emirates (see Figure 1.9). The share of the exploitation of these natural resources in the Norwegian economy has increased over the years through growth in production on one hand and by near continuous rises in oil and gas prices on the other. This sector now represents a very sizeable portion of the economy. In 2006, the whole sector represented 25% of GDP, 36% of state revenues, 24% of total investment and 51% of exports (Ministry of Petroleum and Energy, 2007). The rise of petroleum production, with its related direct supply industries has given way to a “dual economy”. The thriving fossil fuel sector with regularly increasing revenues but rather limited impact on employment (according to Statistics Norway, only 59 622 employees at the end of 2005 out of a total employment figure of 2 298 000), stands in contrast with all other sectors. In particular, its continuous upward development strongly

Figure 1.9. **The largest oil producers and exporters in 2006**

Source: Petroleum Economics Ltd.

obeys to exogenous factors, in any case even much more markedly than service or manufacturing sectors exposed to global competition.

The challenge posed by the increasing share of oil and gas revenue in the economy is to avoid on the long term negative impacts on the competitiveness of other sectors, as these resources strongly contribute towards making Norway a high cost economy.⁹ Striving to maintain a high level of productivity and innovation in all sectors is thus a permanent challenge for the Norwegian economy. The other risk is that of petroleum revenues contributing to inflation. Norway has avoided this up to now by creating in 1990 a Petroleum Fund, now appropriately called the Government Pension Fund – Global (see Box 1.1), as it is designed to contribute towards financing increasing pension costs in the face of ageing (see further).

In spite of these policies, recent hikes in oil prices can still have perverse effects, as underlined by the *OECD Economic Survey of Norway (2005)*. “The recent oil price rise thus implies exogenous positive shocks to: *first*, the terms of trade, which skews relative prices and hence factor flows in favour of the oil sector and away from other sectors; and *second*, domestic demand, both private and public, in the medium run. The size of the shock is such that it could lead to upward pressures on wages, inflation and the exchange rate. The policy challenge is to stabilise output by judicious use of macroeconomic policies, as well as to uphold non-oil sector competitiveness by fiscal discipline and assertive structural policy reform”.

The territorial impact of oil and gas production is uneven, as it is linked to the location and exploitation of the undersea reserves. First discoveries and

Box 1.1. The Government Pension Fund – Global

The Government Petroleum Fund was established in 1990 to build up financial reserves in order to preserve an equitable share of the present petroleum revenues for future generations and decades, and to prevent short-term fluctuations in the oil price from influencing spending in the current and next year's budget. The Fund is fully integrated into the state budget and net allocations reflect the total budget surplus (including petroleum revenues). It remained empty until 1996, as a result of the recession of the early 1990s, but has seen a rapid build-up in assets in recent years. As supported by previous OECD Surveys (*e.g.*, OECD 2004a), the government decided in 2005 to establish the Government Pension Fund, encompassing the former Petroleum Fund (renamed the Government Pension Fund – Global) and the National Insurance Scheme Fund (renamed the Government Pension Fund – Norway). Its real return can be seen to provide a partial pre-funding of future pension liabilities. This fund is mainly a transformation of depleting resources (oil and gas) into financial assets. As this wealth belongs in theory to present and future Norwegian generations, the capital stock should be preserved, and only the returns consumed, to allow future generations their own choices in allocating these earnings.

As a monetary policy tool (by sterilising foreign capital inflow and preventing any appreciation due to oil revenue), the Government Pension Fund – Global (GPF) also prevents any sharp moves of the Norwegian Krone. The fund is managed by Norges Bank, but separated from the management of official currency reserves and from ordinary central bank functions. According to the investment guidelines issued by the Ministry of Finance, the fund's capital is invested exclusively in foreign financial assets; 50 to 70% of the portfolio is allocated to fixed income assets and 30 to 50% to equities. The fund is geographically diversified with roughly 50 to 60% invested in Europe, and 50 to 40% in the Americas, Asia and Oceania. The ministry sets a benchmark portfolio and determines a limit for maximum deviations from the benchmark that the Bank is allowed to take. The value of the fund was NOK 357 billion in 1998, and has risen to NOK 1 784 billion (more than 110% of mainland GDP) by end of 2006. Total return on the GPF over the last two years has been 21%, primarily reflecting high returns in equity markets. For the period 1997 to 2006, the average annual real return was 4.6% after deducting management costs. In 2004, new ethical guidelines were adopted in the allocation of the fund's international investments. In April 2007, the government announced plans to increase the equity allocation to 60%.

Source: OECD (2005), *OECD Economic Surveys: Norway*, OECD Publications, Paris, and Ministry of Finance.

off-shore production took place on the continental shelf of the North Sea and the Norwegian Sea. The supply and maintenance related impacts (production, installation and repair of rigs) and indirect effects on the local service economy (hotels, restaurants, transportation) were thus felt off the coast of

south-western and central Norway. Stavanger became the “oil capital” of the country, with this activity rapidly superseding both fishing and ship-building, the latter facing strong competition from low cost countries. Bergen and Kristiansund also reaped the benefits of the new activity. Lastly, R&D in the petroleum sector and building-up of know-how through academic institutions is concentrated in that part of the country.

As production of the tremendous reserves in the Barents Sea picks up (in particular with the Snow White field), there will be some degree of regional impact. This could even be rather significant: up to 4 300 new direct and indirect jobs are expected to be created in North Norway by 2025, and EUR 2.5 billion in contracts signed with local businesses (Barents Secretariat, 2006). On the other hand, the particularly harsh climate and darkness two months of the year in the northernmost parts of the country are serious obstacles to significant population inflows into what could be considered a “New Eldorado”. Taking also into consideration the fact that the petroleum base already established in central and south-western Norway, it is likely that the main supply base for the exploitation of these resources will remain elsewhere. On the other hand, pro-active regional policy and tax breaks for firms and individuals in that part of the country (see further) can help in attracting new businesses and people, with many service jobs likely to be created.

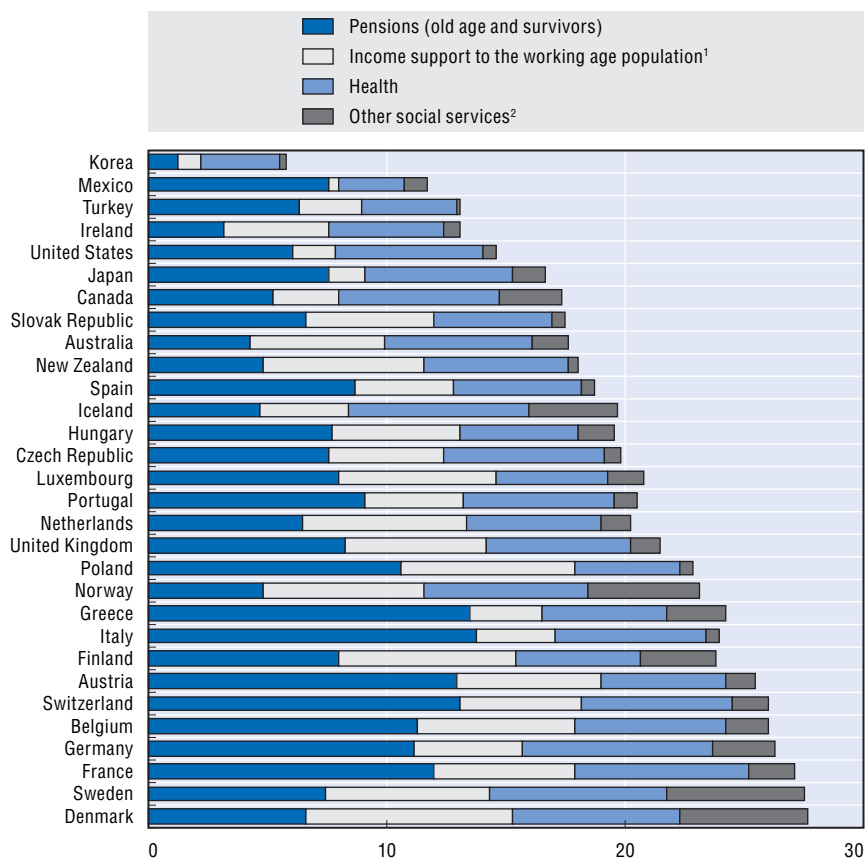
1.1.4. Changes in society and long-term impacts

Ageing and related issues

The regularly increasing revenue stream offered by petroleum production puts Norway in a better position than other countries to deal with the budgetary effects of ageing. The creation of the Pension Fund is testimony to this. Nonetheless, relatively high shares of sickness leave costs and disability payments compared to other OECD countries, plus a high level of labour market exits because of disability could create public financing difficulties on the longer run, even if petroleum revenues continue to increase. Longer term growth of healthcare expenditure for the elderly could only reinforce such a scenario. Although social benefit spending in Norway is situated in the OECD median, in line with other Nordic countries (see Figure 1.10), these factors could lead to constraints in public spending. These social and demographic trends and projections are briefly presented here, insofar as their impact could well be particularly felt in remote or peripheral areas that are already at difficulty. The following analyses are drawn from the *OECD Economic Survey of Norway* (2005).

Norway, like most OECD countries, will experience significant ageing in the next decades. The proportion of those 65 or older will increase from

Figure 1.10. **Public social benefits in OECD countries**
% of GDP, 2001



1. Income support to the working age population includes incapacity (disability and sickness), active labour market policies and unemployment benefits.
2. Other includes family and housing benefits.

around 15% of the population to 24% by 2040. The old-age dependency ratio (65 and older relative to those 15-64) is expected to almost double reaching 40% by 2040, as compared with more than 50% for the OECD, inducing a major shift of resources toward services for the aged. On the basis of current rates of labour force participation, the ratio of workers to “retirees” (all persons aged 50 and over who are not in the labour force) is projected to decline from almost 3 to 1 in 2000 to just over 1.7 to 1 in 2050. Growth of working age population will slow from almost 1% per year currently to close to zero by 2050. Norway, therefore, faces a risk over the next few decades of slower economic growth, pronounced labour shortages and rising tax rates to finance a greater volume of services for, and transfers to, the older generation.

Elderly workers and retirement age

Employment rates for older people in Norway are among the highest in the OECD and pensioners currently enjoy reasonable replacement rates. Current spending on public old-age pensions, at around 7% of GDP, is quite low compared with most other OECD countries (see Figure 1.10). However, when these large economically active cohorts eventually retire they will receive much higher benefits than previous generations, and most people of pension age will by then be entitled to full public old-age pensions. Pension spending will start to rise quickly. Norway is expected to move from being a low spender to one of the top spenders in the OECD area in the absence of reforms.

Consequently, although Norway has one of the overall highest OECD employment ratios for older workers (aged 55 to 64), employment rates fall sharply with age, particularly from age 62. Only a third of people aged 64 are employed, even though the official age of retirement is 67. In the 1990s, employment rates increased on average, but fell for those aged 62 and older. Despite a tight labour market, since 1995 the average number of hours worked has fallen at least five hours per week for both prime and 55-59 aged workers. The drop has even been sharper for workers aged 60-64. Besides, the average retirement age has followed a downward trend since the mid-1980s from roughly 68 to close to 62 today. This evolution reflects the introduction of an early retirement scheme in 1989 and the gradual lowering of the age of entry in this scheme during the 1990s. Further including the rise in the number of disability pensioners thanks to an easily accessible and generous scheme, the effective age of labour market exit has reached a low of 59-60 in 2004, among the lowest in the OECD.

Sick leave, disability and labour market exit

Compared with other countries Norway has very high labour force participation rates, especially among older people. However, Norway has today one of the highest shares of older people (more than 15% of the 55-59 average group and more than 25% of the 60-64 age group) who are reported as ill or disabled. Few of these eventually re-enter the workforce. In 2000, more than 85% of the men and 66% of the women in the age group of 50-59 who left the labour market did so because of illness or disability. Between ages 60 and 64, disability schemes are the main labour market exit route, outpacing early retirement. From 1993 to 2001, the inflow of new disabled kept rising. Recently, whereas new disability inflows among old-age workers have seemed to stabilise, they have been increasing strongly among younger cohorts between 30 and 50.

As long-term sick leave is often the first step to disability, it is not surprising that Norway has one of the highest number of days lost due to

sickness (24), twice the median OECD (12) as well as the highest disability rate in the OECD. In Norway, sick leave has been rising since the mid-1980s. Paid sick leave days rose from eight per worker per year in 1983 to a record of 14.2 days in 2003. Since the first quarter of 2004, this trend has reversed with a fall of about 10% between 2003 and 2004 and almost 20% from 2003 to 2005, that seems due to stricter control rules (OECD, 2006b). In 2006, however, sick-leave increased by approximately 3.5% as compared to 2005, according to Statistics Norway.

Age-related expenditure and financing

According to the latest national estimates, adding old age and disability pensions together, total age-related expenditure would rise by 10 percentage points of mainland GDP (from 9 to 19%) by 2050 – assuming no significant further rise in the number of disabled or early retirees. The rise in health costs including technology developments and long-term care for the elderly is harder to estimate but according to the government could be as high as 4 percent points of GDP. Adding rising health costs would bring the expected total rise in age-related spending to some 14-15% of mainland GDP.

Health care expenditure as a share of GDP remained broadly stable until the end of the 1990s but started to grow thereafter and was 9.5% in 2002, one percentage point higher than the OECD average (Figure 1.11). Health care expenditure was 12% of Mainland GDP in 2002, second highest in OECD.¹⁰ In *per capita* terms, health care spending in Norway is the third highest in the OECD, after the United States and Switzerland. It is more than 50% above the OECD average, and also well above levels in other Nordic countries.

Immigration patterns

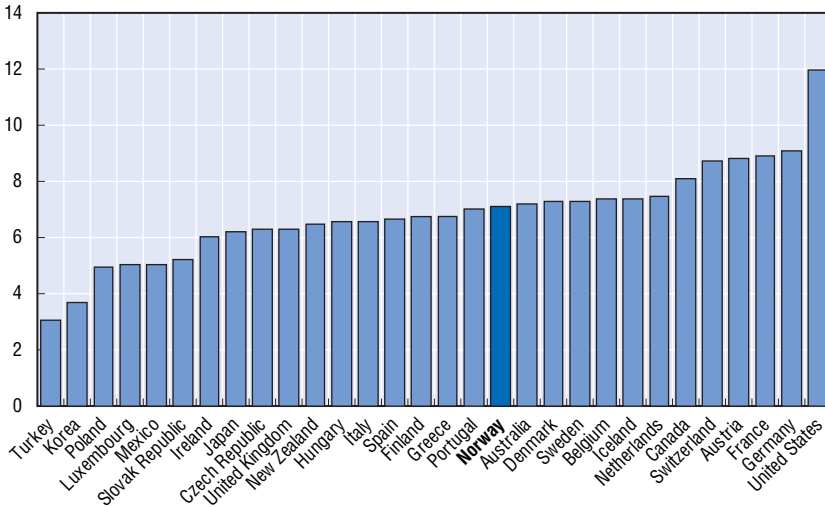
In 1970, only 1.5% of the Norwegian population was an immigrant or person with two immigrant parents. At the beginning of 2006, there were 387 000 immigrants, accounting for 8.3% of the population.¹¹ Norway opened its doors to immigrants since 1970, greeting not only people seeking jobs but also an increasing number of asylum seekers. The importance of groups from Somalia, the Balkans and now Iraq are testimony to this open policy, in line with the highest level of bilateral development aid in the world, in terms of Gross National Income or GNI (0.87% in 2004, as compared with the UN target of 0.7% reached by only four other countries). Norway's immigrant population originates from more than 200 different countries. Immigration increased through the Balkan wars of the 1990s and in recent years most new immigrants have come as a result of family reunions.

A great majority (318 500) are first generation immigrants, while 68 200 are born in Norway by two foreign-born parents. Among the largest

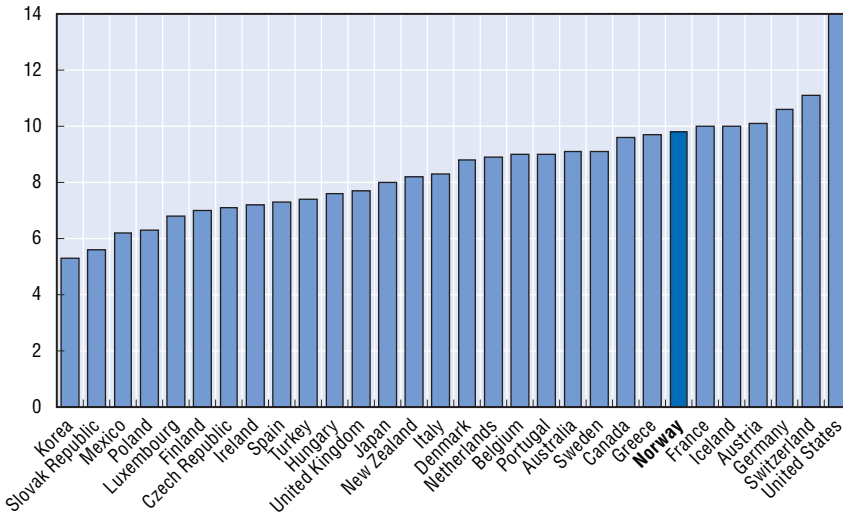
Figure 1.11. **Total health care expenditure in OECD countries**

As a percentage of GDP

1995¹



2002¹



1. Or nearest year available.

Source: OECD Health Data, 2007.

groups, Pakistanis feature the highest ratio of persons born in Norway (45%). Among people with background from Morocco, India, Sri Lanka, Turkey and Viet Nam, the proportion is more than 30%. Since 1970 there have been big changes in immigration flows. In 1970, only 6% of the immigrant population

came from non-European countries, North America and Oceania. By 2006, 56% belonged to this category. Fifty-three thousand persons are immigrants from Nordic countries, 49 000 come from other countries in western Europe and North America, 68 000 come from Eastern Europe, and 217 000 from Asia (including Turkey), Africa and South America.

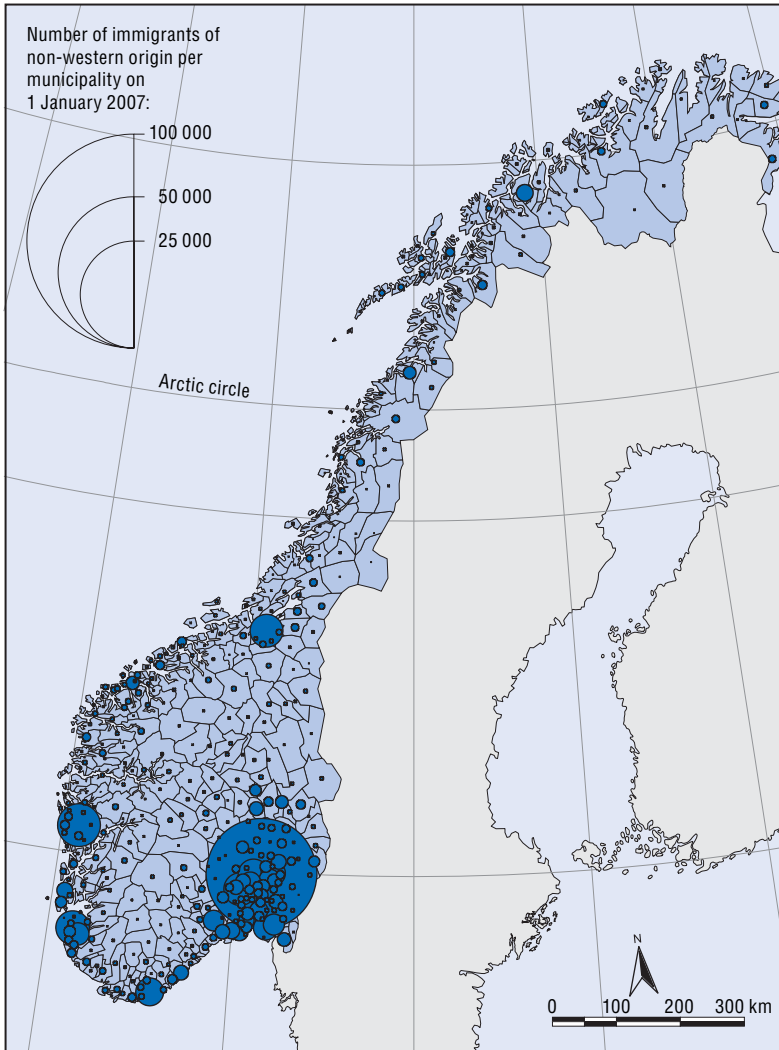
In January 2006, the great majority of immigrants in Norway were of non-western origin:¹² 285 300 inhabitants (6.1% of the population), *versus* only 2.2% of the population being immigrants from western countries. Fifteen immigrant groups count more than 10 000 persons. Pakistanis represent the largest (27 700), followed by Swedes (23 500), Iraqis (20 000), Danes (19 100) and Vietnamese (18 333).¹³ Changes over the last five years show there has been almost no increase for western European immigrants. The number of Russians has more than doubled, and the number of Iraqis, Somalis and Poles has almost doubled. Among the largest immigrant groups, Germans represent the only western group that has shown large growth. Forty-seven per cent of the immigrant population has Norwegian citizenship. Close to 45% of immigrants reside in and around Oslo but most municipalities have inhabitants of foreign origin (see Figure 1.12).

Compared with the population as a whole, immigrants show lower labour force participation rates and experience higher unemployment. However, the employment rate among first generation immigrants increased from 56.6% to 57.5% between the 4th quarter of 2004 and the 4th quarter of 2005. For the whole country, the employment rate only increased by 0.1 percentage points (69.3% to 69.4%). The registered unemployment rate among immigrants decreased by 1.8 percentage points, from 10% to 8.2%, between February 2005 and February 2006. In the rest of the population registered unemployment fell from 3.4% to 2.6%. Male immigrants experienced the strongest fall in unemployment during the period, at 2.3 percentage points, while the decline in unemployment among immigrant women was of 1.2 percentage points. These trends tend to show that immigrants are increasingly well integrated into the labour market, filling mostly low-skilled vacant positions.

It is difficult to obtain an accurate picture of the total labour migration to Norway: since Nordic nationals do not need any permit, immigration authorities do not register them. The total number of permits granted in relation to employment in 2005 was 50 500 (28 500 new permits and 22 000 renewals). Compared with 2004, this represented an increase of 10 500. The overall increase was due to an increase of 15 000 in the number of renewals, as there was a decrease of 4 500 in first-time permits. Ninety-two per cent of all work permits were granted to European nationals. Although European nationals represent a small share of total immigration, they receive the highest proportion of work permits, underlining that non-western immigrants are often either unemployed or working in the hidden economy.

Figure 1.12. **Non-western immigrants by municipality**

1.1.2007



Source: Statistics Norway.

EU enlargement in 2004 has had a substantial impact on labour migration to Norway. Including renewals, 37 200 permits were granted to nationals of the new EU member countries in 2005, (only 5 900 for nationals from the former EU15) an increase of 8 500 permits compared with 2004. The number of first-time permits declined by 5 800 (from 25 100 to 19 300), while the number of renewals increased by 14 300 (from 3 600 to 17 900). In 2005, as in 2004, the

greatest number of permits was granted to workers from Poland, who, with almost 24 200 permits (18 000 in 2004) represented 65% of all permits. They were followed by nationals of Lithuania with 8 900 permits (7 150 in 2004) and nationals of Latvia with 1 500 (1 300 in 2004). In 2006, the increase has continued, but a much larger proportion of permits are now renewals, indicating that more migrants from central Europe are staying for a longer period.

1.1.5. Long-term nationwide challenges

Value creation and industrial development

In general, Norwegian industry and trade are still largely based on raw materials. In recent decades the development of the petroleum sector and the substantial income this has generated has paved the way for improved welfare schemes and higher salaries. Being more dependent on oil and gas, Norway has also become more vulnerable to the development of petroleum prices. However, even if the petroleum sector is the most profitable, the heavy industries producing aluminium, ferroalloys, pulp and paper are still competitive. In fact, the “China effect” has increased demands for typical resource-based products such as metals and fish. Restructuring requirements within the primary industries, that are often prevalent in more remote areas, are thus growing.

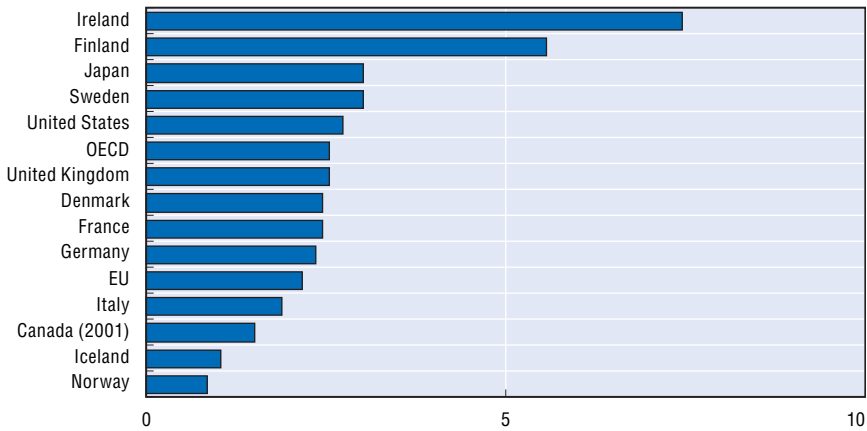
Entrepreneurship in Norway appears to have fallen gradually from 2000 to 2004 but has regained since then (London Business School and Babson, n.d.). In 2005 and in 2006, 9% of the population in the age segment 18-64 was involved in early phase entrepreneurship, as compared to slightly over 7% in 2004 (GEM report for Norway, 2006). Between 2004 and 2006, there has been an increase in entrepreneurship initiatives both by men and women. The increase of female entrepreneurship is the underlying factor in this upward trend, largely offsetting the drop in firm creation by men. Norway thus maintains a good position in Europe concerning start-ups, second only to Iceland, the latter with a 2006 rate of early phase entrepreneurship of 11%. The significant proportion of the Norwegian workforce that has undergone higher education offers the possibility of increasing entrepreneurship even more but it remains a challenge to fully mobilise this expertise for territorial development, as many educated people seek jobs in cities outside of their area of origin.

Norway is rich in natural resources, high on labour productivity and start-ups, but relatively low on R&D and innovation. Norway displays among the lowest shares of high technology manufactures and knowledge intensive services in OECD countries (OECD, 2005c), as Figure 1.13 shows. It also displays the lowest share of slow-growth sectors (low-to-mid tech manufactures and agriculture), the counterpart being a relative intensity in the public and oil

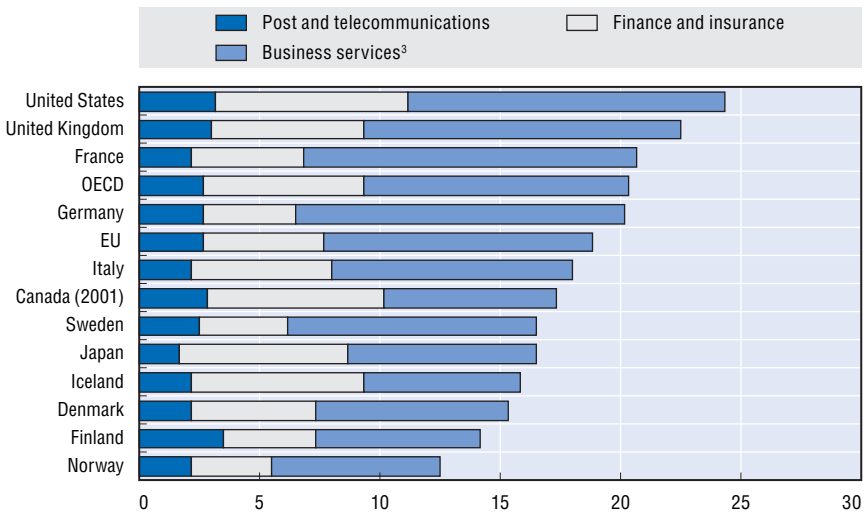
Figure 1.13. **The sectoral composition of output**¹

Percentages, 2002²

A. High-technology manufactures



B. Knowledge-intensive services



1. Share of value added in total value added.

2. Or latest available year.

3. Business services include renting of machinery and equipment (71); computer-related services (72); research and development (73); and other services (74).

sectors. Through the application of advanced technology, the country has succeeded in leveraging its natural resources to face the increased costs entailed by maintaining a high level of quality public services and welfare, following the Nordic tradition, in spite of the impact of ageing that is beginning to be felt. Norway being a high cost country, in particular because of

its petroleum resources, its competitive edge in the future will largely rest on maintaining and developing a highly educated workforce to permit further increases in productivity and to foster innovation.

Value creation and new enterprises are built on strong business clusters with potential for growth. The most favourable areas in Norway from this point of view are oil and gas, maritime and marine industries, electricity and also tourism. Service industries, that now employ three-quarters of the workforce, constitute a key component in renewing and changing the structure of the economy. International markets for services also show significant growth. Besides, the traditional borders between industry and services are disappearing with the increasing service and knowledge content of the various products mentioned above.

Innovation is being increasingly developed in arenas where research, knowledge and experience encounter a market, thus necessitating greater interaction in networks and along value-added chains. The private sector and regional/local public officials need expertise and networks to ensure success with innovative development projects based on partnership approaches. In particular, the ability to convert knowledge into profit varies greatly, so the innovative ability of many small enterprises must be strengthened. One particular need is to reinforce commercial skills, by increasing knowledge of market needs and trends. Lastly, access to credit remains a barrier in many cases, both for small enterprises and start-ups, particularly in peripheral areas, so innovative financing models are required: Innovation Norway, SIVA and NRC, the main public agencies channelling development funds towards the counties, are now implementing different schemes to that end.

Staying attuned to international trends is of vital importance for a small, open economy. The access of Norwegian enterprises to global value chains and their participation in these will represent a demanding task. Structural changes in world commerce, sparked by fast growth in China and other major low-cost and hi-tech countries like India, result in lower costs on imported goods, keeping prices down. These changes also represent both challenges and new possibilities for the Norwegian economy. As work-intensive production is moved to other countries, a knowledge and innovation driven economy is required in high-cost countries like Norway. Defending market positions by maintaining leadership and by heading development in a particular niche demands interaction between market-driven and research-based innovation, as opportunities provided by new technological solutions and market needs are developed simultaneously. In this area, Norway has yet to increase its level of R&D, especially in the private sector.

Low ratio of R&D to GDP: “the Norwegian Puzzle”

Total R&D expenditure for all sectors, including government and higher education, amounted to NOK 29.6 billion in 2005 (Statistics Norway, 2006). This figure represents an increase of 6.5% from 2004. Total R&D as a percentage of GDP was 1.5 in 2005 and significantly lower than the corresponding figure for 2004 and 2003 with 1.6 and 1.7%, respectively. This decrease is due to the large increase in GDP, partly due to trends in the oil sector, with 11% additional revenues in 2005 and 9% in 2004. In Norway, it is primarily the R&D share for business and industry that has fallen. In 2005, the share was 0.8% of total GDP, compared with 0.9% in 2004 and 1% in 2003. These figures include research institutes serving business and industry. The corresponding figures for Sweden, Finland and Denmark were 2.9%, 2.5% and 1.7% of GDP respectively (OECD, 2007a).

What OECD calls the “Norwegian puzzle” in the *OECD Economic Survey of Norway* (2007) relates to the fact that despite weak innovation inputs and also weak outputs, Norwegian per capita incomes are very high by international comparison, even excluding oil earnings. Mainland GDP is about 75% of total GDP at current very high petroleum prices. The level and growth rate of Total Factor Productivity (TFP) has been respectable by international comparison. Innovation in processes and delivery systems is likely to have a positive impact on TFP growth because higher outputs can be achieved with fewer resources. The Norwegian puzzle can be regarded as this combination of high and dynamic incomes but low measured innovative activity. Amongst possible explanations are that the economy is under-represented in innovation-intensive industries, as it is mostly resource based. The fact is that what matters for productivity is using innovations, even if they have been developed elsewhere and not necessarily developing them at home. Another view is that R&D matters most for high-tech industries, but that best productivity growth is achievable in low-tech industries with minimal spending. The other puzzle is therefore that today’s innovation theory does not manage to explain long standing economic growth in Norway.

It is a fact that Norway has few high-technology industries outside the petroleum sector. The share of low-tech manufacturing production in total manufacturing output is around 80%, a considerably higher figure than almost any other OECD country. Low-tech does not necessarily mean low productivity: productivity in general in Norway is high. In part, this represents a reaction to the high levels of per capita GDP which have been boosted by rising oil exports. The conclusion from the above is that the Norwegian puzzle is a real one. Despite a favourable policy climate for innovation, spending on it is low. A continuing steady rise in productivity is essentially synonymous with innovation, creating demand for new products and better ways of producing

and distributing all products. In view of a still far away reduction in petroleum production and revenues, there is a real need for Norway to find ways of rising above the current investment level in innovation if expectations of continued prosperity are to be satisfied.

Managing increased pension and welfare costs

Just as petroleum production and revenue are powerful factors of economic growth that is not without risk for the non-petroleum economy and future competitiveness in global markets, this important source of tax income, which contributes to a sizeable share of the national budget, cannot in itself ensure the sustainability of the Norwegian welfare model in the face of increased ageing. An OECD Economics Department Working Paper (Bellone and Bibbee, 2006), clearly states that the pension and old age welfare system as it now stands is a long way from sustainability, “even if the entire revenue of the (former) Petroleum Fund (present Pension Fund), were devoted to satisfying future pension promises and maintaining current standards of health care as the ratio of retirees to working people rises”. Reforms are thus considered to be “both necessary and urgent, with the aim of reducing the future budgetary costs of ageing while also boosting the potential growth rate of the economy, in particular by encouraging longer and fuller working lives”.

Reform in these areas is now under way, on the basis of a government White Paper issued in December 2004, with future measures necessarily somewhat limiting certain advantages such as those presented previously: possibility of early retirement under advantageous conditions, generous disability and sick leave schemes preparing early retirement and lesser taxation of pensions as compared to salaries, amongst others. These features are at the core of the welfare state, that will be more and more solicited as ageing increases: higher cohorts of pensioners in parallel to pressure for growth of old-age related healthcare. This is a tremendous challenge, not only with societal impact but also with bearing on the future functioning of municipalities which deliver the major share of public services in the country.

There is broad political consensus about the need for a reform. Some of the features of the proposed reform, on the basis of the Pension Commission proposals (January 2004) and the guidelines of the White Paper, are presented here. Early retirement would be less attractive (the mandatory retirement age is presently at 67). There would be no upper limit on retirement age. On such a basis, with enhanced work incentives and a new indexation method, Ministry of Finance estimates are that, thanks to the reform, unfunded pension liabilities would be reduced from about 400% of mainland GDP to a still massive 250% in 2050! To understand the scope of the problem as it stands today, the OECD Working Paper underlines that the present value of pension

liabilities substantially exceeds the combined expected assets of the Petroleum Fund and the National Insurance Fund (NIS), now merged.

To sum up, “even if ultimately passed and undistorted, the reform would save less than a third of the estimated financing gap due to pensions, with much uncertainty remaining on the future impact of the proposed pension reforms on the labour supply. Given also other large fiscal risks such as long-term care and health care, this implies that more ambitious reforms, also in other areas, will almost certainly be necessary”. The choices that will be made cannot be neutral in terms of regional development, as the areas where ageing trends are often more pronounced (remote and peripheral areas) are those that presently are focused in priority by regional funding schemes (see Chapter 2). This is certainly a challenge and specific safeguards might be required for that purpose.

Immigration and territorial development

As in many countries of immigration, there is a certain degree of polarisation in the capital city and in the adjacent areas. According to Statistics Norway, in 2006, 32% of the total immigrant population resided in Oslo county and 12.5% in neighbouring Akershus. These counties are followed by Rogaland (Stavanger) with 7.5%, Hordaland with 6.9% (Bergen), Buskerud (Drammen) with 5.9% and Østfold (Moss) with 5.7% of the total immigrant population. There are also immigrants residing in nearly all Norwegian municipalities, which is a unique feature as compared to other countries where the great majority of immigrants are concentrated in certain urban areas and do not reside in smaller, usually rural municipalities. It is a fact that only two Norwegian municipalities did not have any non-western immigrants at the beginning of 2006.

Also, 14 municipalities had a proportion of immigrants higher than 10%. Most of these municipalities are located in the area around Oslo. In the capital city itself, 123 900 people are immigrants. Oslo had the highest share of immigrants in the country (23%), followed by Drammen (17.6%) and Lørenskog (14.3%). The highest shares of non-western immigrants can also be found in the same municipalities: 18.9% for Oslo, followed by Drammen (15.1%), Lørenskog (11.7%) and Askim (11%). The concentration of immigrant population and particularly non-western immigrants in the Oslo metropolitan region and in other major cities brings forward urban development challenges to avoid ethnic and social exclusion. Most non-western immigrants tend to live in certain less favoured parts of cities, bringing up issues relating to integration and public services requiring a holistic urban policy approach.

In terms of immigration, Norway thus shows some rather unique features as compared to other countries: in spite of the predominance of certain groups,

there are immigrants from a great mix of countries. Many come from countries having experienced political turmoil, while a relatively open policy as compared to many countries has facilitated family reunions and integration. Systematic training in the Norwegian language has also contributed to this.¹⁴ In terms of territorial development, it is interesting to note that immigrants are spread all over the country, even if there is a certain concentration in and around the capital and in some cities. Immigrant population can help to alleviate certain effect of negative demographic trends while contributing to the local labour force, insofar as certain labour shortages may be identified. On the other hand, a certain number of these immigrants finally move to city areas, mostly in the south. However, the relatively wider geographical spread could further integration by preventing the constitution of “ghettos” in overcrowded urban areas.

1.2. Regional trends

1.2.1. Demographics

Population is unevenly distributed among Norwegian regions. In 2006, one third of the total population was living in the capital region and its surrounding areas – Oslo (11.7%), Akershus (10.8%), Østfold (5.6%) and Buskerud (5.3%) – while another 18% was concentrated in the south-west counties of Hordaland (9.8%) and Rogaland (8.6%), which constitute, respectively around Bergen and Stavanger, the other two major urbanised regions in Norway behind the capital city area. This pattern is the result of demographic trends of the last 26 years (Table 1.1). Over 1980-2006, the average annual population growth rate in Akershus (1.2%) and Rogaland (1.1%) was more than double than that of Norway (0.5%). On the contrary, population growth has been significantly below the national average in Hedmark (0.04%), Oppland and Sogn og Fjordane (0.1%) and even negative in Finnmark where it stood at -0.3% and Nordland (-0.1%).

As a result of these trends, the regions of Akershus and Rogaland have significantly increased their population share (+21% and +16%, respectively) while a majority (11) of regions have registered a large decrease in their national weight (Table 1.2). This decrease is particularly pronounced in the counties of Finnmark (-19%), Nordland (-15%), Hedmark and Sogn og Fjordane (-12%) and Oppland (-11%). All of the five northern counties experienced a loss in population, with Finnmark hit the hardest. Outside of this area, six counties located in the south, either in the interior or on the coast, also met demographic decline, with the highest (Hedmark) at a level quite comparable to that of the northern counties, meaning that such negative trends are not limited to the northern periphery but affect many rural or remote regions.

Internal migration seems to be the main cause for the decrease in regional population in more recent years (Table 1.3). Over the period 1998-2005, migration to other Norwegian regions accounted for a reduction in population

Table 1.1. **Average annual growth rate in regional population, 1980-2006**

Region	1980-85 (%)	1986-90 (%)	1991-95 (%)	1996-2000 (%)	2001-05 (%)	1980-2006 (%)
Oslo	-0.3	0.5	1.1	1.0	0.9	0.6
Akershus	1.0	1.4	0.9	1.5	1.1	1.2
Hedmark	0.0	0.0	0.0	0.1	0.1	0.04
Oppland	0.2	0.0	0.1	-0.1	0.1	0.1
Østfold	0.2	0.2	0.1	0.7	0.8	0.4
Buskerud	0.5	0.5	0.3	0.7	0.6	0.5
Vestfold	0.5	0.7	0.6	0.9	0.7	0.7
Telemark	0.1	0.1	0.0	0.2	0.2	0.1
Aust-Agder	1.0	0.6	0.6	0.5	0.3	0.6
Vest-Agder	0.6	0.6	0.7	0.8	0.7	0.7
Rogaland	1.2	1.0	1.1	1.0	1.0	1.1
Hordaland	0.4	0.6	0.6	0.6	0.6	0.6
Sogn og Fjordane	0.2	0.1	0.2	0.0	-0.1	0.1
Møre og Romsdal	0.1	0.1	0.2	0.2	0.1	0.1
Sør-Trøndelag	0.2	0.3	0.5	0.5	0.7	0.4
Nord-Trøndelag	0.3	0.0	0.1	-0.1	0.2	0.1
Nordland	0.0	-0.3	0.2	-0.2	-0.2	-0.1
Troms	0.2	-0.1	0.5	0.1	0.2	0.2
Finnmark	-0.5	-0.7	0.7	-0.7	-0.3	-0.3
Norway	0.3	0.4	0.5	0.6	0.6	0.5

Table 1.2. **Regional share of population (%), 1980-2004**

Region	Share 2006 (%)	Growth in population share 1980-2006
Oslo	11.7	5
Akershus	10.8	21
Hedmark	4.0	-12
Oppland	3.9	-11
Østfold	5.6	-2
Buskerud	5.3	1
Vestfold	4.8	5
Telemark	3.6	-10
Aust-Agder	2.2	2
Vest-Agder	3.5	5
Rogaland	8.6	16
Hordaland	9.8	2
Sogn og Fjordane	2.3	-12
Møre og Romsdal	5.3	-9
Sør-Trøndelag	5.9	0
Nord-Trøndelag	2.8	-10
Nordland	5.1	-15
Troms	3.3	-8
Finnmark	1.6	-19

Table 1.3. **Determinants of regional dynamics of population**
1997-2005

Region	Increase in population	Natural balance	Net internal migration	Net international migration
Akershus	47 893	20 563	17 020	10 289
Aust-Agder	3 004	959	-598	2 646
Buskerud	12 323	2 770	4 476	5 080
Finnmark	-1 887	2 598	-7 715	3 250
Hedmark	2 442	-3 158	1 626	3 971
Hordaland	27 293	16 341	527	10 425
Møre og Romsdal	2 967	5 145	-8 090	5 908
Nordland	-3 073	2 309	-12 820	7 454
Nord-Trøndelag	1 959	1 762	-2 868	3 065
Oppland	968	-1 827	-1 931	4 693
Oslo	37 374	22 897	-745	15 257
Østfold	16 802	1 172	12 136	3 517
Rogaland	30 001	20 294	1 069	8 651
Sogn og Fjordane	-1 123	2 034	-6 139	2 978
Sør-Trøndelag	16 137	7 529	2 698	5 954
Telemark	2 266	-741	-1 277	4 285
Troms	3 461	4 455	-5 605	4 606
Vest-Agder	9 727	4 304	331	5 100
Vestfold	13 302	1 477	7 905	3 931

Source: StatBank Norway, 2006.

equal to -10% in Finnmark, -6% in Sogn og Fjordane, -5% in Nordland and above -3% in Møre og Romsdal and Troms. In all these regions, however, the negative impact of internal migration has been partially offset by the inflow of international migrants.

International migration also explains a significant proportion of the overall population growth in Oslo (+15 000), Hordaland and Akershus (+10 000), as well as Rogaland (+9 000). In Oppland and Telemark the high level of international migration has significantly compensated the negative effects of internal migration and of the natural balance, which would have implied alone an even stronger reduction in population. The important contribution of these flows is reflected in the strong concentration of non-western foreign population (the great majority of immigrants in the country) in the regions of the south, especially in the south-east.

One noticeable implication of these demographics trends is on the different pace of ageing among regions. Regional trends in ageing over the last two decades (Table 1.4) suggest that while certain regions have seen their situation improve – Oslo (4%), Aust-Agder and Telemark (3%) – in others the proportion of working age population has been decreasing – Akershus (-3%), Finnmark (-2%) and Troms (-1%). Overall, it is to be noted that significant

Table 1.4. **Regional population aged 15-64 years (%), 1980-2004**

Region	1990 (%)	1995 (%)	2000 (%)	2004 (%)	1980-2004 (%)
Oslo	66	66	68	70	4
Akershus	69	67	66	66	-3
Hedmark	64	63	63	64	0
Oppland	64	64	64	64	0
Østfold	65	65	65	65	0
Buskerud	65	65	65	66	1
Vestfold	65	64	64	65	0
Telemark	63	63	64	65	2
Aust-Agder	63	64	65	65	3
Vest-Agder	64	63	64	65	1
Rogaland	64	64	65	65	1
Hordaland	64	64	64	65	1
Sogn og Fjordane	62	62	62	63	1
Møre og Romsdal	63	63	63	64	1
Sør-Trøndelag	65	65	65	66	1
Nord-Trøndelag	63	63	63	63	0
Nordland	64	64	63	64	0
Troms	67	66	66	66	-1
Finnmark	68	67	66	66	-2
Norway	65	65	65	65	1

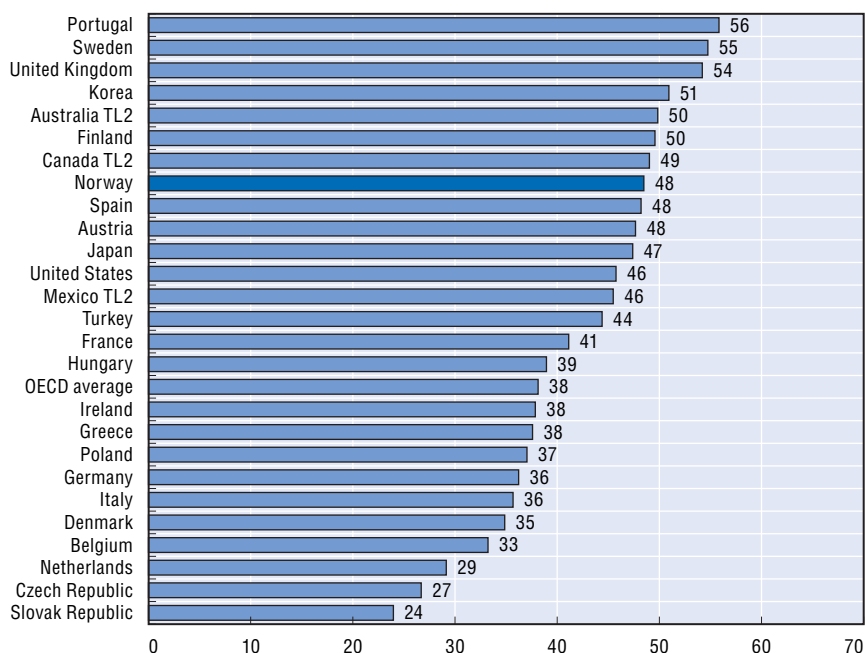
increases of working age population over the period have been registered only in the three regions indicated above, while seven regions experienced an increase of 1% (national average) and six met with stagnation (0%). Two out of the three with a decreasing share of active age population are located in the northern periphery (Finnmark and Troms), while the third northern region (Nordland), stagnated. This illustrates the challenges facing such regions and the specific focus of regional policy towards these in particular (see Chapter 2).

1.2.2. GDP per capita

The main feature of the Norwegian economy is the high geographic concentration of economic activities. In 2003, 4 (out of 19) NUTS 3 regions accounted for half of the national GDP (excluding offshore activities), with the capital region (Oslo) alone representing 22% of the total. Compared to other OECD countries, Norway registers a relatively high degree of geographic concentration of GDP (Figure 1.14), ranking it in the eighth position behind Portugal, Sweden, the United Kingdom, Korea, Finland, Australia and Canada, with Denmark being the Scandinavian country exhibiting the lowest degree of geographic concentration of GDP.

To a significant extent, concentration of GDP clearly reflects the regional distribution of population. Like other countries in the region, Norway is

Figure 1.14. **Index of geographic concentration of GDP (TL3) in OECD countries, 2003**



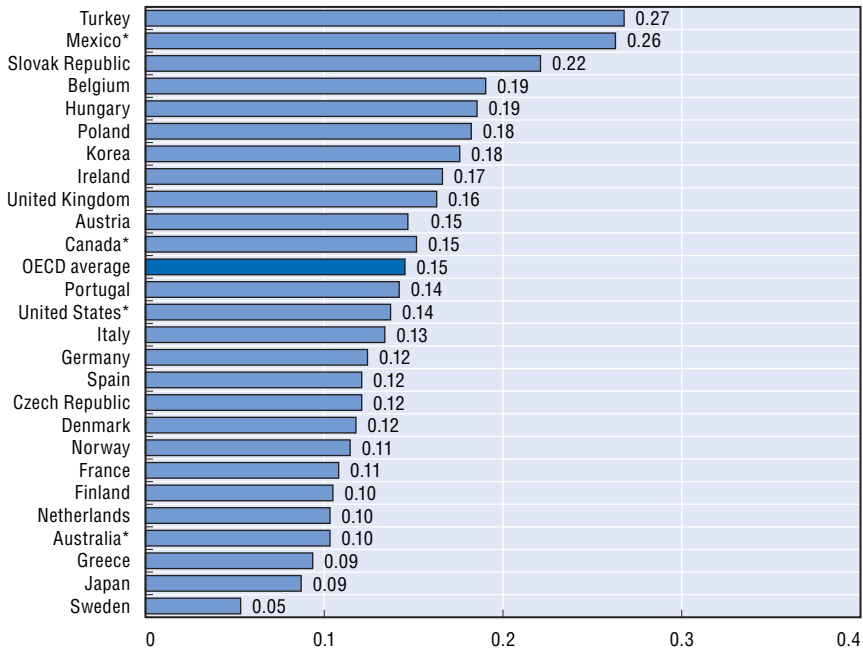
Note: The index compares the economic weight and the geographic weight over all regions in a given country and is constructed to account for both within- and between-country differences in the size of regions. The index lies between 0 (no concentration) and 100 (maximum concentration) in all countries and is suitable for international comparisons of geographic concentration.

Source: OECD (2007), *OECD Regions at a Glance*, OECD Publications, Paris.

characterised by the polarisation between densely populated regions and sparsely populated ones. However, high concentration is not only the result of the localisation of population but it seems also due to differences in GDP per capita (Figure 1.15). In particular, GDP appears to be more concentrated than population, meaning that densely populated regions tend to have higher GDP per capita than scarcely populated ones.

This is particularly the case of the capital city-region, as in nearly all countries. Looking only at Nordic countries with population densities and urban patterns comparable to Norway (which excludes Denmark), the latter concentrates in the capital area 22% of GDP (28% for Sweden, 35% for Finland) but only 11% of the population (*versus* 21% and 29% respectively for the two others), meaning that the highest GDP to population ratio for the capital region is attained by Norway (1.9).¹⁵ The capital city area creates the highest level of wealth given its population as compared to the other two countries (both a

Figure 1.15. **Regional disparities in GDP per capita amongst OECD countries, 2003**



Note: Unweighted Gini Index, i.e., each region is weighted by 1, independently of the size of its population.

Source: OECD (2007), *OECD Regions at a Glance*, OECD Publications, Paris.

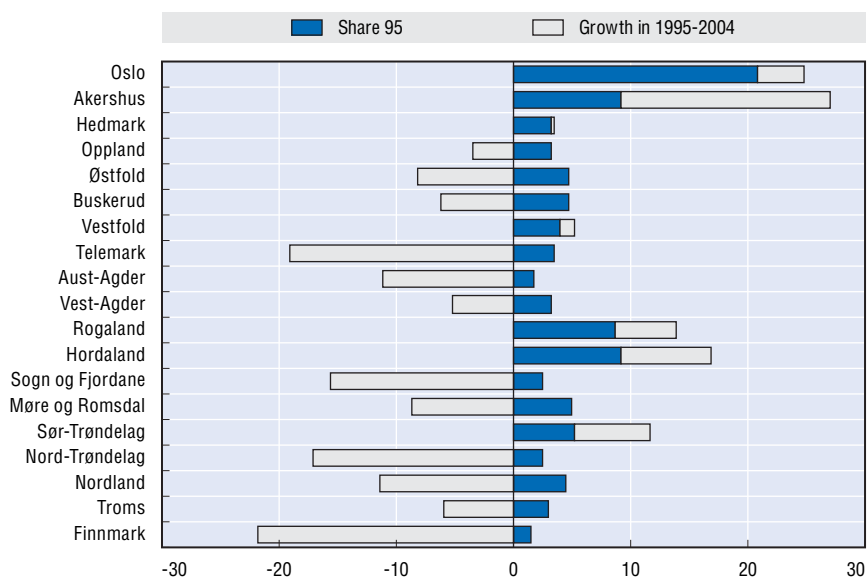
GDP to population ratio of 1.4). Higher productivity rates as compared to the rest of the country can be an explanation (see further).

Thus, in Norway about 22% of GDP (excluding offshore activities) in 2002 was produced in the region of Oslo, the only region classified by the OECD as predominantly urban, although it represented only 11% of the total population. This value is higher than the GDP-population ratio of Finland (where urban regions account for 38% of national GDP and 22% of the total population) and is largely above the ratio observed in urban regions in Sweden (28% of national GDP and 21% of the total population) and Denmark (39% of GDP for 29% of the population).

Concentration has increased over recent years (Figure 1.16). In general, regions with a large share of national GDP in 1995 further increased their share over the following period 1995-2004, while the opposite occurred for most regions with a small share. The increase was particular pronounced in the region of Akershus (neighbouring Oslo), with the second largest GDP share in 1995, while the largest decrease was registered in the regions of Finnmark

Figure 1.16. **Growth in the regional share of GDP (1995-2004)**

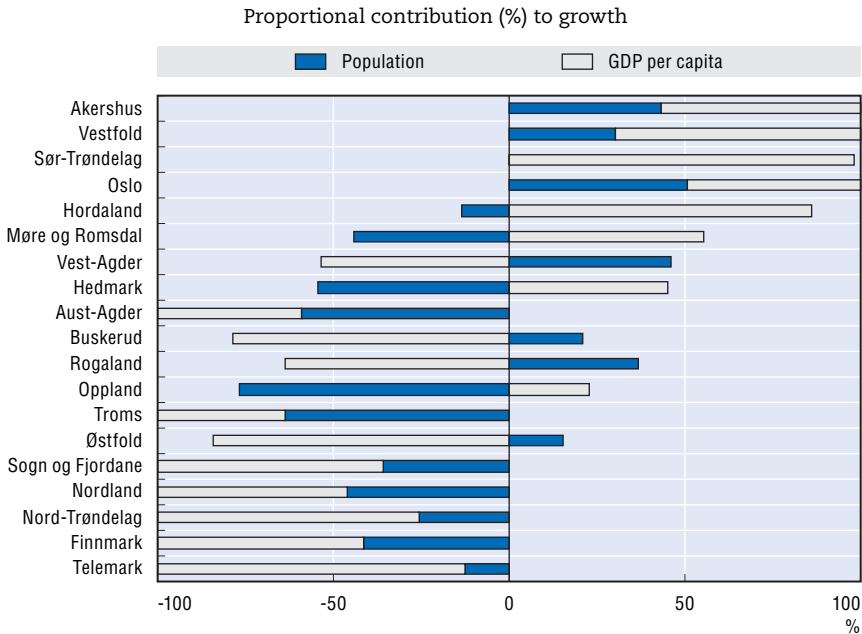
Sorted by share in 1995



(northernmost county) and Telemark (South), which in 1995 already had among the smallest regional shares of GDP.

In recent years (1995-2002), this trend seems mainly due to changes in GDP per capita rather than to demographics (Figure 1.17). Oppland, Hedmark, Aust-Agder and Troms are the only regions where slow growth or even decrease of population is the main explanation for the observed changes in GDP. In most of the other regions, it is the evolution of GDP per capita that explains the increasing weight of some regions (Sør-Trøndelag, Hordaland and Vestfold) and the decreasing weight of others (Nord-Trøndelag, Telemark, Østfold and Buskerud). It is to be noted that these trends offer no specific clear-cut geographical pattern, with remote or peripheral counties (characterised by low population densities and population loss) more affected than others by stagnation or negative trends. Out of the four regions mentioned, Troms is thus the only region in the northern periphery having experienced a relative loss of GDP share, in comparison to others, because of slow growth or decrease of population. Likewise, amongst the five counties considered to be losing ground, Trøndelag is the only one situated in the north, with the other four located in different parts of the south.

Figure 1.17. **Population, GDP per capita and impact on regional shares of GDP (1995-2002)**



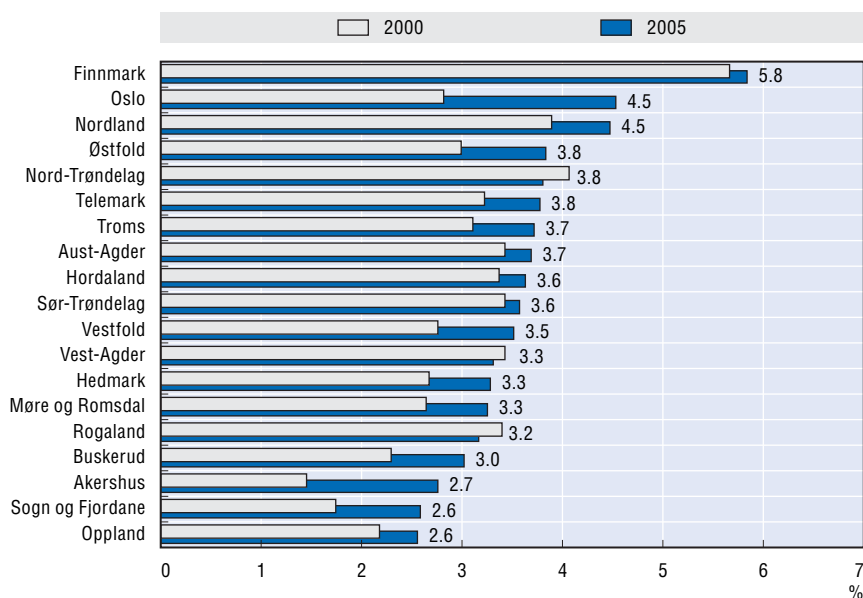
1.2.3. Unemployment

Compared to other OECD countries, Norway shows among both the lowest rates and lowest regional disparities in unemployment. Despite a rapid increase (+1 percentage point) between 2000 and 2003, the rate of unemployment declined by the same proportion between 2003 and 2006. In 2006, the Norwegian unemployment rate (3.5%) was lower than the OECD average (6%) and well below the rates of Finland (7.7%), Sweden (7%) and Denmark (3.9%).

Regional disparities in unemployment rates are equally low. In 2003, only seven OECD countries (Japan, Ireland, the Netherlands, Sweden, the United States, Greece, and France) registered regional disparities in unemployment rates lower than Norway (OECD, 2007b). However, the increase in unemployment during 2000-2005 observed at the national level seems to have affected regions with a different strength (Figure 1.18). During this period unemployment rates increased the most in Oslo (+1.7 percentage points) and Akershus (+1.3) while the increase was more limited in Sogn og Fjordane, Østfold and Vestfold (+0.8) and Buskerud (+0.7). In contrast, the regions of Nord-Trøndelag (-0.3), Rogaland (-0.2) and Vest-Agder (-0.1) registered a decrease in their unemployment rates during 2000-2005.

Figure 1.18. **Trends in regional unemployment rates (2000-2005)**

Sorted by 2005



Source: Statistics Norway and Panda Regional database.

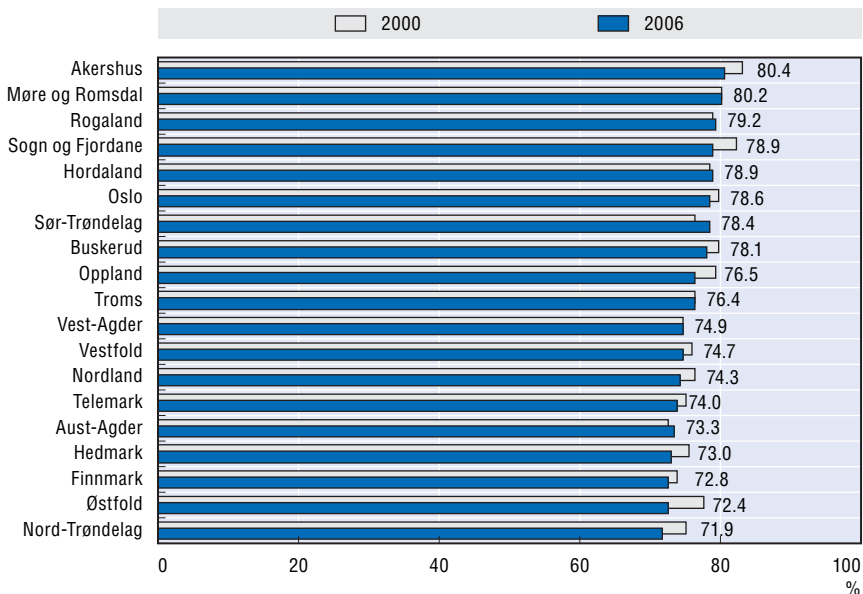
The upward trend in the unemployment rate during 1998-2005 was amongst others, influenced by the monetary regime at the time with its inflation target, which in turn had its impact on export driven industries such as manufacturing and communication. Other sectors that suffered a decrease in employment include public administration, transport/storage and, to a lesser extent, agriculture. Therefore, regions where these three sectors accounted for a larger proportion of employment suffered from a larger increase in unemployment. In Sogn og Fjordane, this effect was partially offset by the significant decrease in the labour force (-2%). Those regions where unemployment remained constant or even decreased (Nord-Trøndelag), owe this result to a very large development of services, especially health and social work. The monetary regime was changed in the spring of 2001 and together with the latest upswing in the Norwegian economy, has contributed to a positive development in employment. For instance, in manufacturing, the number of people employed increased by 5 000 persons as an average from 2005 to 2006. The strongest growth in employment from 2005 to 2006 came in the sector of financial and business services and building and construction.

The slowdown from 2000-2005 is reflected by a general reduction in employment rates. In fact, during 2000-2005, the national rate of employment

(share of persons of working age population [15-64] in employment defined at the place of residence) declined by 2.8 percentage points (OECD.Stat). At the regional level the rate decreased in the majority (13 out of 19) of Norwegian regions (Figure 1.19) during 2000-2006. Østfold, Nord-Trøndelag, Sør-Trøndelag, Hedmark and Oppland experienced the largest decrease in employment rates, whereas Sør-Trøndelag and Aust-Agder increased their employment rates the most, followed by Rogaland and Vest-Agder. The regions with the highest GDP per capita, being the most open to the global economy, were probably harder hit by the economic slump than other regions, including the lesser performing ones. In five regions that decreased their rate of employment (Nordland, Oppland, Nord-Trøndelag, Østfold and Hedmark) the reduction resulted from a decrease in employment while in the remaining regions it was due to a larger increase in the working age population.

Figure 1.19. **Trends in regional employment rates (2000-2005)**

Sorted by 2006



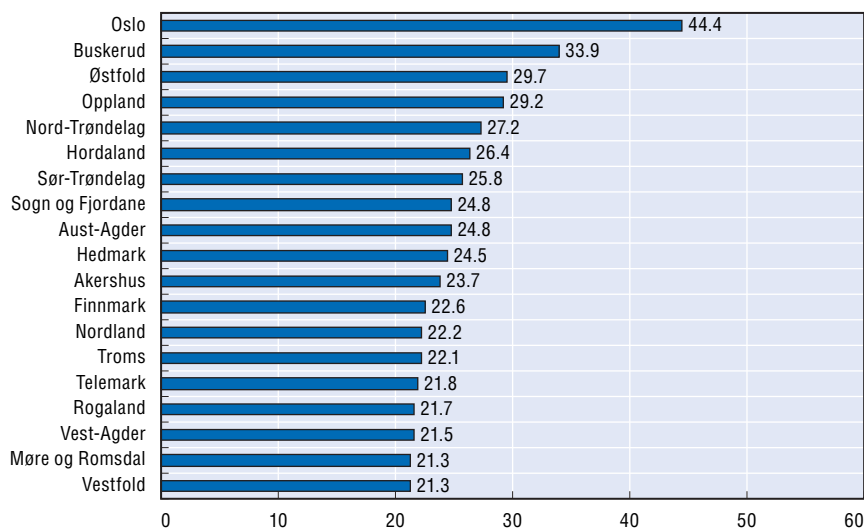
1.2.4. Skills and innovation

The quality of the Norwegian educational system in terms of outcomes is generally excellent and Norway ranks high within OECD member countries from different points of view (OECD, 2006c). In Norway, more than 88% of the population has completed upper secondary education (OECD average based on 30 countries: 67%). Likewise, Norway ranks highest among OECD countries

in terms of number of years spent in formal education by the adult population: close to 14 years by both males and females. The proportion of 25 to 34-year-olds having completed tertiary level education, around 40%, is comparable to that of Finland, Sweden, Belgium and Ireland.¹⁶

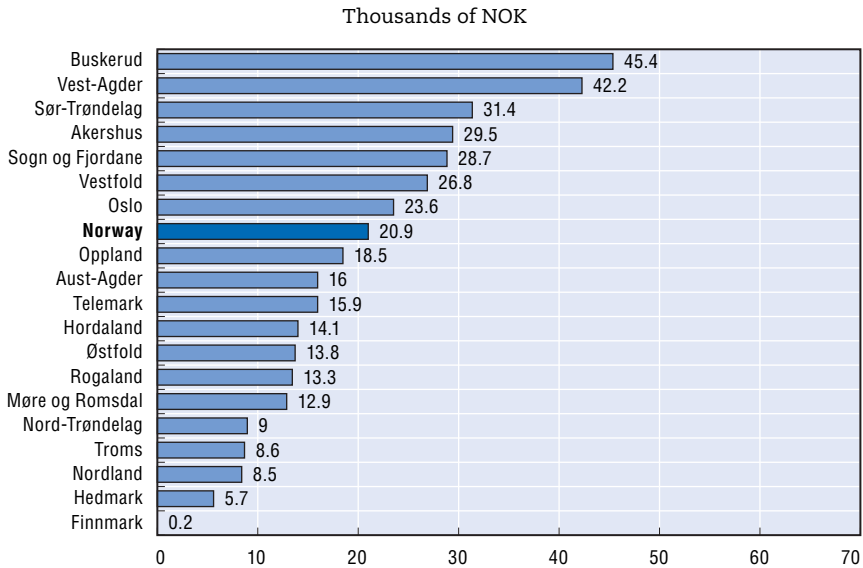
Higher education, in the form of universities and/or university colleges, can be found in each of the 19 counties. Today, there are few urban/rural differences in participation rates. Nonetheless, a much higher proportion of students (40%) come from families where both parents have also experienced tertiary education, whereas when one or both parents experienced only primary schooling (which is more often the case in rural areas) the percentage drops to 8% (OECD, 2005a). There are also significant regional differences in skills. The proportion of the population aged 25-66 years having a university degree or above varies from 44% in the Oslo region to 21% in Vestfold (Figure 1.20). Østfold and Buskerud are other regions with a high percentage of highly educated people (about 30%) while in most of the remaining regions the proportion of skilled population is significantly lower (below 25%).

Figure 1.20. **Regional disparities in educational attainments in Norway, 2001**
Population aged 25-66 with tertiary education (%)



Note: Tertiary education corresponds to level 5 and 6 of the International Standard Classification of Education (ISCED 97).

The regional distribution of R&D is however, somewhat different (Figure 1.21) as it is influenced by national policies. The highest ratio of total R&D (private) per employed is registered in Buskerud (NOK 45 400), and Vest-Agder (NOK 42 200) followed by Sør-Trøndelag (NOK 31 400), Akershus

Figure 1.21. **Private investments in R&D per employed (2004)**

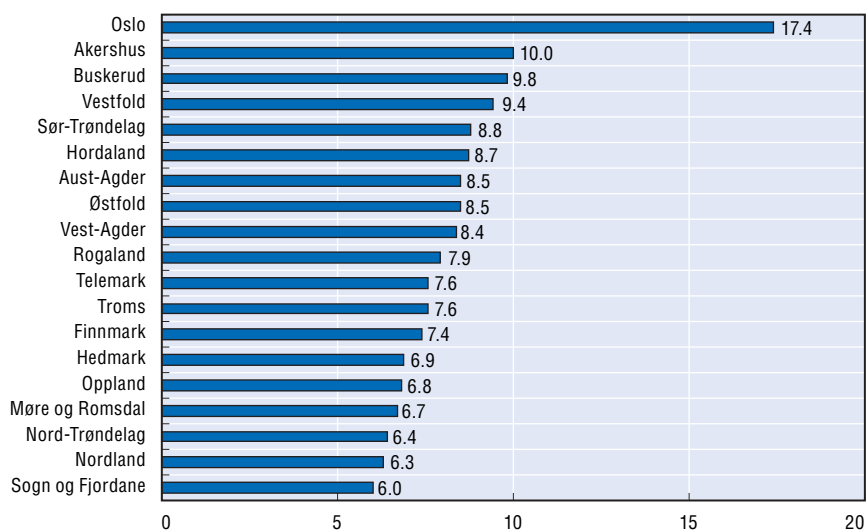
Source: Statistics Norway.

(NOK 29 500), Sogn og Fjordane (NOK 28 700), Vestfold (NOK 26 800) and Oslo (NOK 23 600). From this group, Vestfold, Vest-Agder and Akershus have significantly lower educational attainments than the rest.

The preceding analyses confirm that the regional localisation of R&D seems to be correlated with two factors. The first is the presence of large urban centres, which concentrate firms' headquarters, Knowledge-Intensive Business Services (KIBS), universities and private laboratories. Thus, the presence of the capital city and that of the cities of Trondheim and Kristiansand explain the high R&D ratios in the regions of Oslo, Sør-Trøndelag and Vest-Agder. The second factor for high R&D is the existence of small industrial clusters: electronics and high tech in Horten (Vestfold); defence, aerospace, maritime and automobile in Kongsberg (Buskerud); light metals and aluminum in Raufoss (Oppland); and paper, offshore oil, gas technology, IT and telecommunications in Kristiansand (Vest-Agder).

While R&D provides a key measure of the level of investment in innovation by existing firms, a significant proportion of innovation take place through the entry of new firms. According to survey data, the share of innovation firms among Norwegian start-ups appears just below 60% (Spilling, 1996). However, the registration rates of new firms vary significantly among regions (Figure 1.22). In general, counties with a dense population have a higher ranking because of the concentration of economic opportunities. As start-up rates are different from one

Figure 1.22. Registration rates per 1 000 people (2004)



Source: Spilling, O.R. (1996), "Regional Variation of New Firm Formation: The Norwegian Case", *Entrepreneurship and Regional Development*, 8(3), pp. 217-243.

industry to another, the industrial structure also contributes to these rankings. Areas dominated by heavy industries tend to have low start-up rates while high start-up rates in services tend to explain the good score of Oslo.¹⁷ These two factors – economic opportunities and industrial structure – are also likely to explain higher start-up rates in urban regions than in rural ones.

According to Spilling, social attachment is the most important factor for deciding on where to establish a new company (80% of the respondents to the survey). Other factors are: good living conditions, proximity to the markets, low costs, good company buildings, good social services, and a favourable industrial environment. Therefore, the attractiveness of regions for start-ups seems to depend on a mix of both market and non-market factors. In the case of Norway, the availability of high quality public services across the country would tend to reduce the impact of this factor on location choices but other considerations such as accessibility and distance can play a role.

1.2.5. Regional performances

When looking at the differences in performance between regions, one distorting factor, that of commuting, needs to be taken into account to avoid misinterpretations. Living in one region and working in another means that earned income is accounted for in one but spent income benefits another. As GDP per capita is measured with the former, commuting needs to be considered as proxy for the effects of geographic location. This having been

stated, several factors contribute to explain the differences observed in regional performances.

Some of these factors are related to the “natural” endowments of a region – geography, population trends, historical heritage, amenities – some others to a more efficient utilisation of regional assets – productivity, industrial specialisation, labour market performance, education, innovation. The factors of competitiveness specific to a region can be assessed by benchmarking regional performances against those of the whole country. Taking GDP per capita as a measure of performances, the difference between the level of GDP per capita in a region and the national average can be entirely explained as the result of six factors:

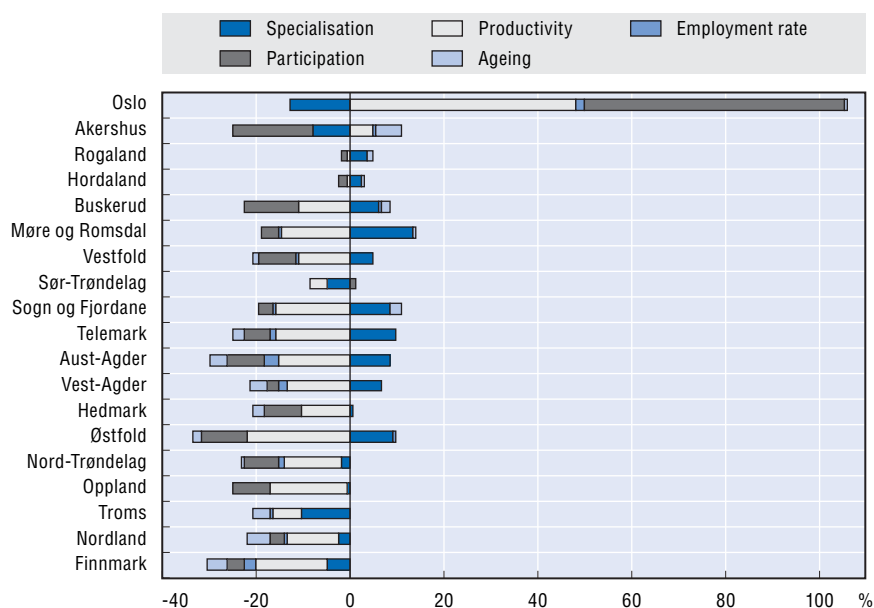
- Commuting: proxy for the effects of geographic location.
- Labour productivity: a proxy for the productivity of the regional production system.
- Participation rate: measures the labour force supply.
- Employment rate: indicator of the efficient functioning of the local labour market.
- Specialisation: impact of sectoral mix on capability to compete in high value added activities.
- Ageing: an indicator of the impact of population dynamics.

The first of these factors – commuting – seems to account for a significant proportion of regional differences in GDP per capita in Norway. As individuals may be resident in a region – either because they live or are registered there – and work in a different one, GDP per capita would be undersized in the region where they reside and oversized in the regions where they work. When GDP per capita is corrected to take commuting into account, regional differences tend to be reduced (Table 1.5). In particular, GDP per capita in the region of Oslo appears significantly lower (–25%) while it shows a large increase (22%) in the region of Akershus. Similarly, seven of the remaining regions (Hedmark, Oppland, Østfold, Buskerud, Vestfold, Aust-Agder and Nord-Trøndelag) show an increase in GDP per capita between 11% to 15%, two an increase between 5% and 10%, and seven an increase between 1% and 5%.

Figure 1.23 shows the effects of the remaining five factors on the observed differences in GDP per capita adjusted for commuting. The first and the second factor, high labour productivity and high participation rates, account for high GDP per capita in the region of Oslo. On the opposite, lower labour productivity and lower participation appear to be the main explanation for low GDP per capita in most of the remaining regions. In Østfold, low productivity seems to account for a gap in GDP per capita of above 20 percentage points. In Møre og Romsdal, Sogn og Fjordane, Telemark, Aust-Agder, Oppland and

Table 1.5. **Effect of commuting on regional GDP per capita in Norway (2001)**

Region	GDP per capita		
	Observed	Adjusted for commuting	%
Oslo	530 010	397 512	-25
Akershus	230 163	281 008	22
Hedmark	204 187	229 107	12
Oppland	193 033	217 940	13
Østfold	200 767	229 973	15
Buskerud	228 084	262 413	15
Vestfold	220 699	246 272	12
Telemark	219 481	236 250	8
Aust-Agder	208 511	232 811	12
Vest-Agder	220 611	229 238	4
Rogaland	269 532	275 797	2
Hordaland	263 039	268 955	2
Sogn og Fjordane	231 648	243 091	5
Møre og Romsdal	243 435	255 601	5
Sør-Trøndelag	243 951	242 363	-1
Nord-Trøndelag	194 954	217 443	12
Nordland	201 704	211 696	5
Troms	211 883	215 040	1
Finnmark	185 120	198 992	7
Norway	262 205	262 205	

Figure 1.23. **Determinants of regional performances in Norway (2001)**

Finnmark, the GDP gap due to low productivity is no less than 10 percentage points. Apart from Oslo, Akershus is the only region where labour productivity accounts for a level of GDP per capita above the national average (5%).

High labour productivity, in turn, can be the result of four main factors: the stock of physical and human capital, the level of technology, the quality of infrastructures, and the economies of agglomeration due to the concentration of these factors in the same region. Their organisation and interaction by a cluster type approach could in itself be a fifth factor but, admittedly, it cannot be objectively measured.

On the other hand, the results of a regression analysis suggest that regional differences in productivity in Norway are mainly associated with settlement patterns: about 62% of the differences in productivity are explained by whether regions are urban, intermediate or rural.¹⁸ Higher productivity in densely populated regions points to the crucial role of agglomeration economies, but it is also due to the fact that investment in technology (proxied by R&D), human capital (proxied by educational attainments), and infrastructure tend to be concentrated in urban and intermediate regions.

Low labour market participation rates is a second factor of low regional competitiveness. Low rates in Akershus and Buskerud seem to account for a gap in GDP per capita equal to 17% and 11%, respectively. In a significant number of regions (Vestfold, Aust-Agder, Hedmark, Østfold, Nord-Trøndelag, and Oppland) low participation rates explain no less than 7% of the GDP gap.

The third factor, effectiveness of the local labour market, appears to have smaller impact. Small employment rate disparities (ratio of employment to the labour force) imply that labour market performances have little impact on regional competitiveness. Indeed, in the region where the effect of the labour market is the largest – Aust-Agder – the GDP gap is no bigger than –3%.

The fourth factor, the age profile of the population, seems to have a more significant impact, at least in some regions. In Vest-Agder, Nordland, and Finnmark, a small proportion of the working age population (15-64) seems responsible for a GDP gap of no less than 4%. On the opposite, a larger proportion of working age population in the region of Akershus accounts for a positive difference in GDP per capita equal to 5%.

Finally, sectoral mix – the fifth factor – appears as the explanation of high performances in quite a number of Norwegian regions. In general, GDP per worker in agriculture tends to be lower than in manufacturing and services so that the higher the share of agriculture employment, the lower the regional productivity. Table 1.6 shows the industry specialisation of Norwegian regions.

In Møre og Romsdal the relative specialisation in manufacturing and mining accounts for a positive differential in GDP per capita equal to 14%

Table 1.6. **Regional specialisation in Norway (2001)**

Regional employment by industry (%)

Region	Agriculture			Industry			Services				Total
	Agriculture and forestry	Fishery and aquaculture	Manufacturing and mining	Electricity and water supply	Construction	Drilling and extraction of oil and gas	Wholesale and retail trade	Transport and communication services	Central and local government, public services	Other services	
	(%)										
Oslo	0	0	7	0	5	0	16	9	23	39	100
Akershus	1	0	8	1	6	0	21	10	27	25	100
Hedmark	6	0	15	1	8	0	14	5	34	17	100
Oppland	7	0	14	1	9	0	14	5	32	18	100
Østfold	2	0	20	1	9	0	16	6	29	17	100
Buskerud	3	0	18	1	9	0	17	6	28	19	100
Vestfold	2	0	17	1	8	0	17	7	29	19	100
Telemark	2	0	19	1	8	0	14	6	32	17	100
Aust-Agder	2	0	18	1	7	0	14	7	33	17	100
Vest-Agder	2	0	18	1	8	0	15	7	30	19	100
Rogaland	4	0	16	1	7	6	15	6	25	20	100
Hordaland	2	1	14	1	7	2	13	8	29	23	100
Sogn og Fjordane	8	2	19	1	8	0	11	7	31	13	100
Møre og Romsdal	5	2	22	1	7	0	13	8	28	14	100
Sør-Trøndelag	4	1	11	1	7	1	14	7	32	22	100
Nord-Trøndelag	9	1	13	1	8	1	12	7	34	14	100
Nordland	4	3	11	1	7	0	12	9	36	15	100
Troms	3	3	7	1	7	0	14	8	39	18	100
Finnmark	3	5	10	1	7	0	12	7	21	13	100
Norway	3	1	13	1	7	1	15	7	29	23	100

(Figure 1.23, previous). A positive effect of specialisation in manufacturing and mining is equally large in Telemark and Østfold (10%), Sogn og Fjordane and Aust-Agder (9%), Vest-Agder (7%), Buskerud (6%) and Vestfold (5%). On the contrary, a larger weight of personal services in the region of Oslo and Akershus and of the public sector in Troms (39%) accounts for a GDP gap equal to -12%, -8% and -10%, respectively.

In general, regions with a higher share of agriculture employment tend to show a level of productivity just below the average. In fact, lower productivity in agriculture is compensated by a larger share of employment in manufacturing and mining where productivity is higher. This seems to be the case of Sogn og Fjordane and Oppland, where both the share of agriculture

and manufacturing employment are above the national average as demonstrated in Table 1.6 above. The productivity gap due to specialisation is somewhat larger in Nord-Trøndelag, where the share of manufacturing employment is equal to the Norwegian average (13%) but agriculture is much higher (9% against 3%).

1.3. Underused potentials

1.3.1. Education

It has been indicated previously that the performances of the Norwegian educational system overall are considered to be rather good, generally in line with other Nordic countries. This is demonstrated by the fact that average length of curricula and percentages of university graduates are high in most counties. In spite of these results, it has been noted that entrepreneurship levels in recent years appear insufficient. In this context, the main question is how to leverage the outputs of the educational system towards territorial development? The issue is not only one of developing synergies between the educational system and the labour market in terms of job creation but also how to ensure that graduates from university institutions remain in their region, rather than choose to move for their professional life to another part of the country.

The internal brain drain is that of young people moving from mostly rural areas to regional hubs and then often moving to bigger cities in other counties, particularly the Oslo area, the adjacent Akershus region and Trondheim, where job creation are highest. A concrete illustration of this is provided by the General Practitioner of Steigen, a rural municipality in the county of Nordland, visited by OECD in June 2006. The GP states that during the 32 years spent as a doctor in the area, 15 students from Steigen graduated as medical doctors from different universities but that none returned! This rural municipality experiencing population decline is considered to be typical of many towns in the country. Access to public services cannot be brought forward as a reason, as high standards and adequate availability in all parts of the country (see Chapter 2) are prime features of the Norwegian welfare state.

From this point of view, the higher educational system in Norway has a good territorial spread: six universities, five specialised university institutions and 25 university colleges cover the country, with the northernmost one, in Tromsø, created in 1968, as a deliberate regional development policy move. Policy measures, particularly over the last few years, have reinforced the regional development role of Higher Education Institutions (HEIs): more result oriented financing, possibility of establishing foundations or share holding companies in particular. In spite of these, results achieved up to now in terms of impact, appear below the level of the response required to really contribute

to regional growth by capitalising on the skills of the manpower that is trained in these institutions.¹⁹ Different policy tools, presented in Chapter 2 deliberately favour peripheral areas to retain inhabitants and attract firms.

1.3.2. Tourism

Tourism in Norway accounts for 3.4% of GDP and the industry's share of total employment was 6.4% in 2006, according to Statistics Norway. The country presents unique natural and cultural tourism assets, the best known of which are the remarkable fjords bringing together maritime and mountainous features which are practically unrivalled in the world. The cultural and architectural heritage is diverse and most original, from the Viking ships exposed in Oslo to the Stave churches located in different parts of the country or the Hanseatic features of Bergen and the Trondheim cathedral, just to mention a few. UNESCO Norwegian World Heritage sites number six, one of which is constituted by the famous Geirangerfjord and Naeroyfjord on the western coast, the five²⁰ other being cultural heritage. The latitude of Norway provides opportunities for year-round tourism from the splendour of the Midnight sun to the amenities of winter sports offered nearly six months of the year in many parts of the country.

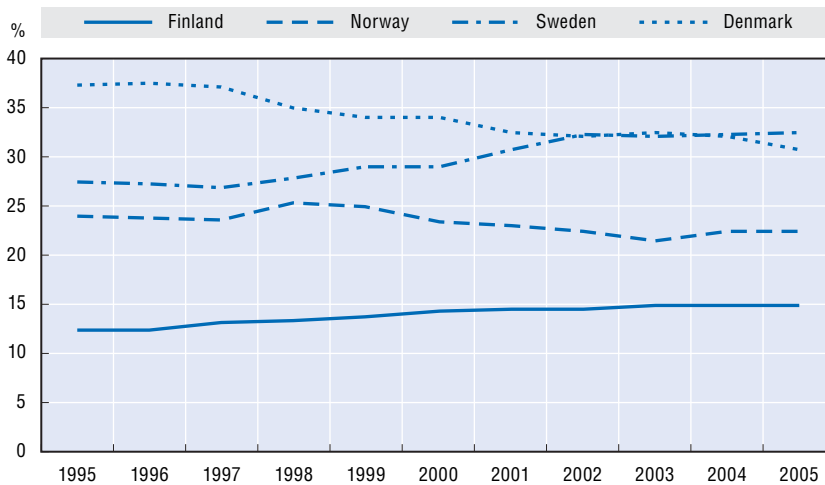
In spite of these quite attractive features, Norway ranks only third amongst the Nordic countries in terms of foreign tourism flows, measured in foreign overnights²¹ at accommodation facilities, behind Sweden and Denmark but ahead of Finland (Finnish Tourist Board, 2006), as Table 1.7 below shows. Its share has been slipping during the last five years and is now lower than what it was ten years ago (see Figure 1.24). This phenomenon can be linked to the Lillehammer Winter Olympics that maintained for several years after 1995 a high level of attention for stays in Norway by foreign visitors but also to the greater inflow of Russian visitors to Finland. Norway is not a cheap destination as it is a high cost country, but the general decrease in the cost of air transport has reduced the expense of travelling to and within the nation. On the other hand, tourism infrastructure is of high quality and caters in most cases to the more affluent. Also, the fact that the country presents an exceptionally well preserved natural environment while remaining "off the beaten path" is an undeniable asset that could permit further development provided targeted promotional campaigns.²²

Tourism is often one of the single resources that can be usefully developed in rural regions or areas with declining population that often offer valuable natural amenities combined with ways of life and cultural heritage that appeal to the visitor. Distribution of overnight stays in the different counties of Norway in 2005 (see Table 1.8) show that this potential has been largely underexploited up to now. Most overnight stays are concentrated in Oslo (17.20%), with a sizeable share also going to other parts of central Norway

Table 1.7. **Foreign overnights at accommodation facilities in the Nordic countries, 1995-2005**

	Norway	Sweden	Finland	Denmark	Total
1995	7 059 791	7 860 658	3 384 495	10 789 641	29 094 585
1996	6 983 340	7 701 085	3 368 818	10 810 187	28 863 430
1997	7 005 000	7 658 900	3 714 510	10 918 596	29 297 006
1998	7 462 922	8 029 087	3 784 452	10 287 564	29 564 025
1999	7 376 850	8 600 785	3 843 212	9 965 684	29 786 531
2000	7 061 186	8 654 086	4 128 926	10 008 377	29 852 575
2001	6 886 252	9 133 450	4 268 926	9 748 084	30 036 712
2002	6 823 276	9 767 709	4 369 765	9 582 132	30 542 882
2003	6 477 662	9 714 883	4 421 618	9 863 446	30 477 609
2004	6 745 947	9 723 676	4 383 198	9 570 167	30 422 988
2005	6 874 610	10 085 272	4 495 446	9 405 648	30 860 976

Source: Finnish Tourist Board, 2006.

Figure 1.24. **Foreign overnights at Nordic accommodation facilities, 1995-2005**

Source: Finnish Tourist Board, 2006.

(Oppland, 11.12%; Buskerud, 8.72%) and the south, particularly the attractive coastal areas (Hordaland, 10.63%). The share of the most peripheral regions remains modest: Nordland, Troms and Finnmark account together for less than 10% of these stays. Proximity to Oslo benefits some areas (Akershus, 6.47%) but others are far less favoured (Telemark, Hedmark, Vestfold, Ostfold and Aust-Agder all below 4%). This brief overview shows that the tourism potential of many sparsely populated areas that are targeted by specific regional policy measures (see Chapter 2) could be better exploited in the future.

Table 1.8. **Percentage of overnight stays by county and ranking, 2005**

	Percentage (%)	Rank	Population	Ratio overnight/population	
Østfold	1.46	18	258 542	0.964215	19
Akershus	6.47	5	494 218	2.238706	16
Oslo	17.20	1	529 846	5.553261	4
Hedmark	2.79	14	188 376	2.535636	14
Oppland	11.12	2	183 174	10.38787	1
Buskerud	8.72	4	243 491	6.12819	2
Vestfold	2.29	15	220 736	1.771301	18
Telemark	3.86	10	166 289	3.971519	7
Aust-Agder	1.39	19	103 596	2.297695	15
Vest-Agder	3.10	13	161 276	3.292753	10
Rogaland	6.04	6	393 104	2.627666	13
Hordaland	10.63	3	448 343	4.05852	6
Sogn og Fjordane	3.60	11	107 032	5.754158	3
Møre og Romsdal	3.89	9	244 689	2.720776	12
Sør-Trøndelag	5.99	7	272 567	3.759461	9
Nord-Trøndelag	1.50	17	128 444	1.992689	17
Nordland	4.48	8	236 825	3.233827	11
Troms	3.53	12	152 741	3.952325	8
Finnmark	1.96	16	73 074	4.578865	5

Source: Statistics Norway, 2005.

1.3.3. Foreign direct investment

In terms of foreign direct investment (FDI) inflows, including petroleum and related activities, measured as a percentage of GDP, Norway scored lower than other Scandinavian countries over the period 2000-2002. Over the same period FDI inflows also notably diminished like in other Nordic countries, as Table 1.9 below shows. However, from 2003 to 2005 Norway received higher FDI inflows and in 2005 the country even enjoyed the highest percentage amongst all Nordic countries.

Looking at overall FDI flows by county between 1989 and 2004, the picture appears somewhat contrasted, as Figure 1.25 demonstrates. In 1989, all counties were pretty much situated at the same level (not more than NOK 10 billion), with the exception of Rogaland, at twice that level (shipbuilding in Stavanger and beginning of off-shore petroleum exploitation). In the following years FDI flows

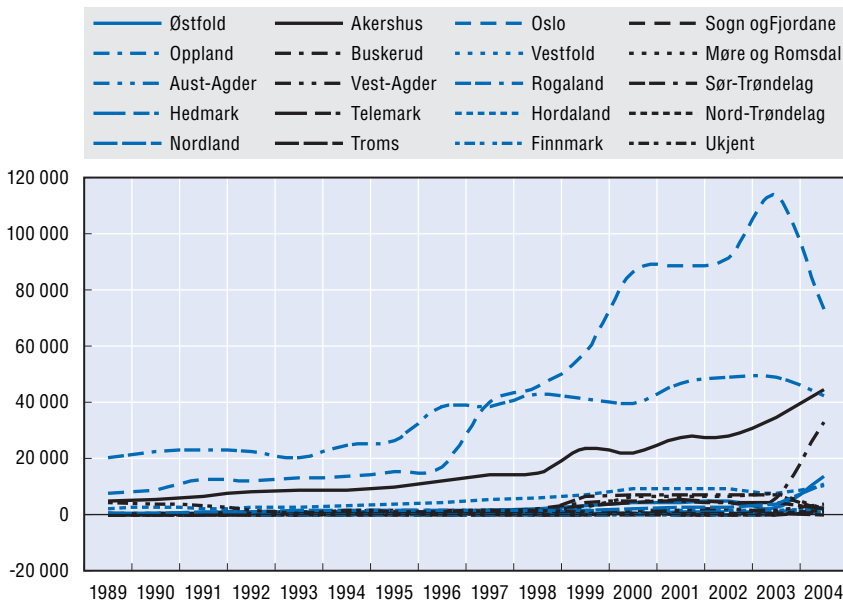
Table 1.9. **Foreign direct investment inflows**

As a percentage of GDP

	2000	2001	2002	2003	2004	2005
Denmark	19.6	7.2	3.8	1.2	-4.4	1.9
Finland	7.3	3.0	5.9	2.0	1.9	2.3
Norway	4.1	1.2	0.4	1.7	1.0	4.8
Sweden	9.6	5.4	4.8	0.4	-0.5	3.8

clearly advantage Rogaland, Oslo and Akershus, with Buskerud and Ostfold, where clusters are located,²³ picking up substantially since 2003. During the whole period, FDI in Rogaland slowly grows and levels off in 2004 at twice the 1989 figure. In 2004, Oslo (NOK 73 055 billion), Akershus (NOK 44 319 billion) and Rogaland (NOK 42 542 billion) lead the way, in proportions far higher than the next contenders, Ostfold (NOK 13 883 billion), Nordland (NOK 10 774 billion) and Hordaland (NOK 10 157 billion). All other counties are below the NOK 4 billion mark and the other two northernmost counties in Norway (Finnmark and Troms) remain at very modest levels (0 for the former, NOK 9 million for the latter).

Figure 1.25. **Evolution of FDI flows in counties, 1989-2004, in million NOK**



Source: Statistics Norway.

1.4. Major issues

1.4.1. The territorial challenges facing Norway

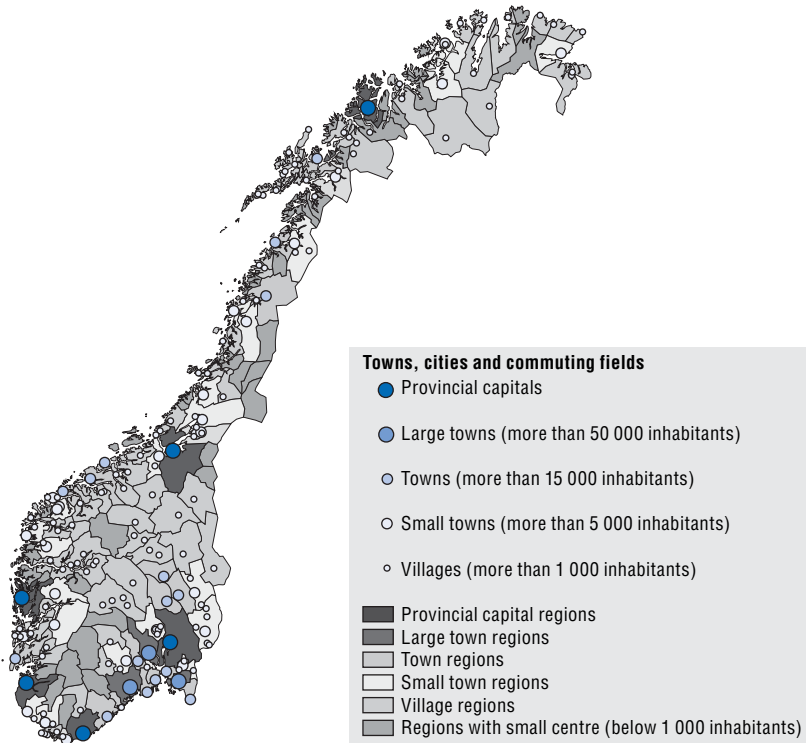
Context

Norway is faced by major territorial challenges. In geographical terms, it is a large country. The distance from the arctic insular regions to the far south is some 2 650 km, while the continental distance from north to south (around 1 750 km) is further than between Oslo and Rome. Moreover, the impact of distance is increased by topographical features, coupled with a relatively harsh climate. Especially in West and North Norway, there are many natural barriers to communications, including a rugged coastline fragmented by deep

fjords, mountainous regions and many islands. As a consequence, communications within Norway have never been easy. As an example of the importance of distance, Vadsø, the administrative centre of Finnmark, the northernmost county, is almost 500 km by road from the county's largest town, Alta. In addition, some mainland parts of coastal communities are better linked by boat than by land. Lastly, difficulties stemming from distance and terrain are multiplied by climate effects. Temperatures in the far north are usually below 0 °C for about 200 days per year, while the long polar night also contributes to the challenges created by geography.

At the same time, Norway is a "small" country in other respects. With a population of just 4.6 million, its economic base relies much more on natural resources than other Nordic countries. The industrial base is not highly specialised in terms of global competition as compared to some of its neighbours. In many parts of the country small businesses, alongside the public sector, are the dominant employers. This combination of being a large country in geographical terms and a relatively small country in population and business development terms creates a number of important territorial challenges. An average population density of just 14 inhabitants per km² raises questions about the viability of local service provision in certain parts of the country. Such questions are particularly intense in the three northernmost counties where the average population density is just 4.1 per km² but other areas (mainly peripheral mountainous and coastal regions) also face serious challenges in this respect. A thinly-spread business community generates similar concerns about critical mass and access to markets. Associated, more general questions can be raised about settlement structures across the country, not least given ongoing population decline in many already sparsely populated areas: is the distribution of population and business such that current settlement patterns can be sustained into the future?

The extent of the settlement challenges facing Norway are underlined by the analytical distinctions used to review the urban structure of the country. The analysis of the regional problem which underpinned the 2005 regional policy White Paper (St.meld.nr.25, 2004-2005) focused particularly on the size of urban centres within regions. Five broad categories were considered: so-called *city regions*, where the main urban settlement has over 50 000 inhabitants; *town regions*, where the regional centre has between 15 000 and 50 000 inhabitants; *small town regions*, with regional centres of 5 000 to 15 000 inhabitants; *smaller centre regions*, based on regional centres of between 1 000 and 5 000 inhabitants; and *sparsely populated regions*, involving settlements of under 1 000 inhabitants. Figure 1.26 shows that there are just nine large city regions (with only one in the north) and only 16 medium city regions (with just three in the north). In addition, at least three-quarters of these large and medium-sized cities are on the coast, leaving the interior largely devoid of significant settlements. This

Figure 1.26. **Cities and small centres, set within their surrounding areas**

Source: T. Selstad, 2007, Lillehammer University College.

pattern is confirmed by the distribution of areas with sparse population that are located mainly in the interior and in the north. The Norwegian challenge in terms of settlement structures is very obvious.

In addition to these basic territorial issues, there is a spatial dimension to many of the key sectoral developments in Norway. For instance, the exploration and subsequent exploitation of petroleum and gas reserves in the North and Norwegian Seas has benefited Stavanger in particular, alongside other locations on the south-west coast including Bergen and Kristiansund. More recently, finds in the Barents Sea area have led to the construction of a liquefied natural gas plant at Hammerfest in Finnmark. This in turn has created broader business opportunities in the far north, though the challenges of climate, location and underdeveloped business networks remain a significant barrier to development. Both agriculture and fisheries also have obvious locational concentrations. Only 3.2% of the surface area is devoted to agriculture with most undertakings located in the east and in central and southern Norway. Over three-quarters of those farms active in the production of grain are in Eastern

Norway, with a further 18% in mid-Norway, though dairy farms are more widely spread. For their part, fisheries are of obvious importance to coastal areas. Almost half of the country's fishermen are employed in North Norway and the region also accounts for just under two-fifths of the total value of production and gross value added in fishing (Glomsrod and Aslaksen, 2006, p. 57).

At the same time, Norway has an open economy subjected increasingly to globalisation pressures. This has created new framework conditions to which Norwegian regions have had to adjust. It has also increased the policy importance attached to regional competitiveness, including maximising the contribution which Oslo and other key cities can make to the Norwegian economy (see Section 2.3). This in turn generates obvious policy challenges when set alongside traditional and long-standing regional problems associated with sparsely populated and peripheral locations. Resolving the policy tension between the need to enhance regional, national and international competitiveness and the desire to maintain current settlement structures lies at the core of the regional development challenge in Norway.

Regional target areas

To understand the issues of remoteness, peripherality, very low population densities and out-migration in Norway, it is essential to grasp not only the geography of these areas presented in Chapter 1 but to identify the factors determining their characterisation. These are objectively defined and weighed in a “periphery index” that is used to delimit the different categories of areas eligible for special compensatory measures in terms of business development or additional support to municipalities for public service delivery. The index has been developed to try to ensure broadly equal treatment for regions facing the same level of challenge, a key policy principle in Norway. It provides a summary indicator of the severity of the periphery problem by combining geographic, demographic, economic development and income indicators (see Table 1.10).

Table 1.10. **Components of the periphery index (with percentage weights)**

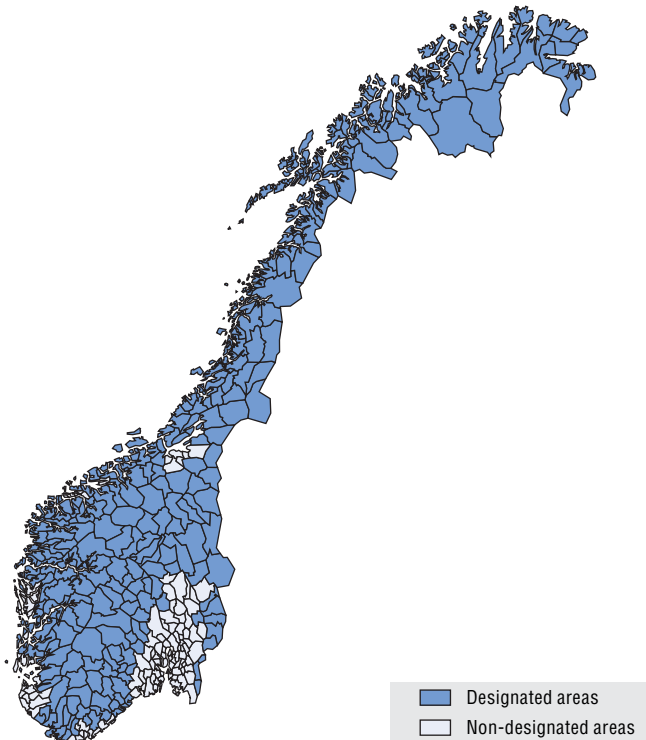
Dimension	Weight	Indicators	Weight
Geographic	40	Measure of centrality (11 different classes)	20
		Population density (inhabitants per km ²)	10
		Travel distance to Oslo (minutes)	10
Demographic	30	Population growth (last 10 years, %)	20
		Population aged 67+ (%)	5
		Women aged 29-39 (%)	5
Economic development, labour market	20	Employees residing in same municipality (%), share of population 20-64 (%)	10
		Employment growth (last 10 years, %)	10
Income	10	Income per inhabitant aged 17+	10

Source: Ministry of Local Government and Regional Development.

Geographic factors account for two-fifths of the index, reflecting the centrality of the location, population density and distance from Oslo (in terms of travel time). Demographic indicators represent a further 30%, with particular stress on population change over the past ten years. The final 30% is accounted for by labour market measures, employment growth and income per head. The periphery index²⁴ ranges from 0 (for the most peripheral area) to 100 (the most central area): this typology feeds into a range of aid targeting decisions and differentiated rates within the designated aid areas.

The map recently agreed for the award of regional investment aid in Norway reveals that the designated problem areas are located across large parts of the country, including a significant area in southern Norway (see Figure 1.27). For 2007-13, the designated areas for investment aid purposes cover approximately 86% of the land mass and two-thirds of Norway's 431 municipalities. These areas however represent only 27.5% of the national population. The three northern counties of Finnmark, Troms and Nordland plus the south-western county of Sogn og Fjordane are eligible in their entirety, together with many other sparsely populated areas in the south.

Figure 1.27. **Designated and non-designated regional aid areas 2007-13**



Source: Ministry of Local Government and Regional Development.

The periphery index for the designated aid areas in Figure 1.27 is less than 40. This compares with almost 80 for the non-designated areas and 68.1 for Norway as a whole. Other features of the designated areas are that they suffer from low population density (just 4.5 inhabitants per km² compared to 77.9 for the non-designated areas) and population decline (a fall in population of almost 3% between 1985 and 2005 compared to population growth of 17.6% for the non-designated areas). These figures reflect the fact that it is the major urban regions, obviously apart from Tromsø in the north, which have been excluded from the map. This includes in particular the area around Oslo, Trondheim, Bergen, Stavanger, Kristiansand and a number of other locations along the coast.

Contrary to most of the dominant settlement patterns in other Nordic countries, in Norway, problems of sparse population and peripherality are thus not restricted to the far north. There are areas much further south (in particular, municipalities in Nord-Trøndelag, Sogn og Fjordane, Hedmark, Oppland, Møre og Romsdal, Telemark, Buskerud and Hordaland,) which suffer from very low population densities and where access is often difficult due to the terrain. Another characteristic is that depopulation is not simply the result of population moving southwards, in particular towards the capital. There is, in addition, the drift of population to regional centres from adjacent rural areas. From a policy perspective, this creates tensions between concentrating efforts on developing and sustaining critical mass and supporting rural hinterlands.

North Norway

In considering the territorial challenge in Norway, there is a particular focus on North Norway (counties of Nordland, Troms and Finnmark). They cover some 35% of the surface area and hold around 10% of the national population. North Norway is often referred to as “an extreme version of Norway”, though many key indicators (including employment trends) are moving towards the Norwegian average (see Table 1.11). The area’s main distinguishing features include sparseness of population (just 4.1 inhabitants per km²) coupled with distance and climate;²⁵ an economy mostly based on natural resources (over one-sixth of industrial employment) and the public sector (just under two-fifths of employment) (see Glomsrod and Aslaksen, 2006); the lack of headquarter functions; higher levels of unemployment and disability payments; high scale of out-migration, ageing population; and, internally, the movement of population to regional centres such as Bodø, Tromsø and Alta as well as to other towns with public sector employment opportunities.

While the three counties are often considered together, there are major differences between them (see Table 1.12). Nordland is the southernmost. Although relatively spread-out (with a periphery index of less than 40), it benefits significantly from hydroelectric power and metal production. While its main regional centre, Bodø, is important in northern terms, it is a medium-sized city

Table 1.11. Employment by sector
Trends in employment by sector: differences between North Norway
and the national average

	1900	1920	1946	1970	1990	2005
Primary	25	22	17	9	3	2.6
Secondary	-15	-13	-12	-7	-3	-4.3
Tertiary	-10	-9	-5	-2	0	1.7

Employment by sector, 2004 (% distribution)

	North Norway	Norway
Primary industries	6.1	3.5
Secondary industries	16.5	20.8
Tertiary industries	77.4	75.7
Of which: public sector	39.1	30.4

Source: Statistics Norway.

**Table 1.12. Population, population density and population change
in North Norway**

	Population 2005	%	Population density (per km ²)	Population change 85-05 (%)	Population change 95-05 (%)	Population change 00-05 (%)	Periphery index
Nordland	236 825	5.1	6.2	-2.8	-1.9	-1.0	39.7
Troms	152 741	3.3	5.9	3.8	1.4	1.0	50.3
Finnmark	73 074	1.6	1.5	-4.7	-4.6	-1.3	33.6
Norway	4 606 363	100.0	14.2	11.1	5.9	2.9	68.1

Source: Ministry of Local Government and Regional Development.

nationally and lacks university status. In contrast, Troms is more compact and accessible (periphery index over 50) while Tromsø is both a university town and a large city in national terms. Finally, in Finnmark, the challenges of location (periphery index 33.6) and sparse population (1.5 inhabitants per km²) are especially severe. Just 4 of 19 municipalities lie above self-development levels. Having said this, Finnmark is well-placed to benefit from petroleum and gas production in the Barents Sea region. In short, the three counties are very different – a case of diversity more than uniformity.

A related point is that there is also considerable differentiation *within* each county. This is particularly the case between the urban centres and surrounding rural areas. Thus, for instance, the main regional centres in Nordland and Troms (Bodø and Tromsø) together have a population density of more than 27 inhabitants per km² compared with 6.2 and 5.9 for their respective counties. In similar vein, the two cities have together grown by more than 11% over the past decade, compared to growth of 1.4% for Troms as a whole and population decline of 1.9% for Nordland. Over the same period,

the population in Finnmark fell by 4.6%, though with an increase of population of almost 8% in its largest town, Alta.

Confirming the general point that there is considerable diversity within North Norway, the 26 most northerly continental municipalities (North Troms and Finnmark) cover a land mass similar in size to the Netherlands but with a population of just over 90 000 (giving a population density of 1.6 per km²). This area suffers from particularly severe population decline, leading to extremely fragile settlement structures. Due to the long distances involved – the region stretches some 1 000 km from Kirkenes in the east to Karlsøy in the west – daily commuting is impossible, the more so given the harsh climatic conditions. Almost inevitably, economic activity has been based on natural resources, with fishing and agriculture initially dominant but with petroleum and gas and also tourism now coming to the fore. Outside the petroleum and gas sector, business development remains problematic, with small labour markets, few business networking opportunities and major restructuring challenges (for instance, in the fisheries sector).

A further important spatial dimension derives from the presence of the Sami population in the north of Norway, Sweden, Finland and Russia's Kola Peninsula (for an overview, see Brenna, n.d.). As an indigenous people in Norway, the Sami have a number of rights including a special right to cultural protection. Perhaps as much as two-thirds of the Sami population (of around 70 000) is based in Norway and the Sami parliament is located in Karasjok in Finnmark. In addition, Kautokeino (also in Finnmark) houses the Sami University College, together with a Resource Centre for the Rights of Indigenous Peoples which was established in 2002.

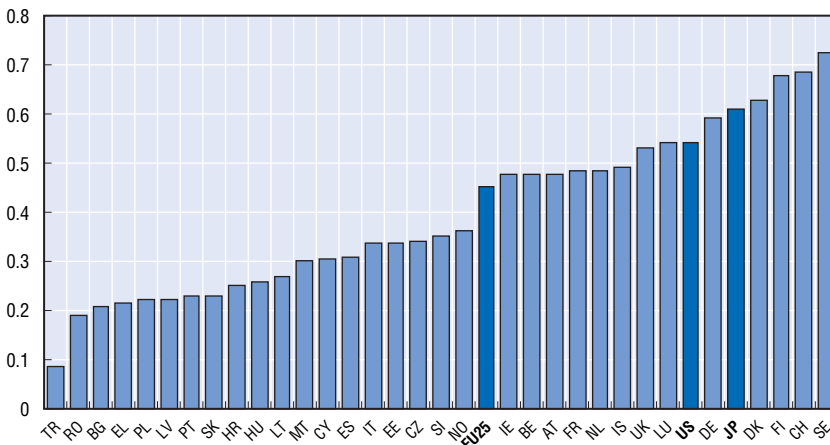
Finally, mention must be made of the so-called High North, “Norway’s most important strategic priority area in the years ahead”.²⁶ The High North is the Barents Sea region, extending far beyond the Norwegian land mass to Svalbard and other island territories. The area covered by Norway’s territorial waters is extensive and contains very considerable natural resources. While the focus for centuries has been on the abundant fish reserves of the area (a consequence of the shallowness and richness of the Barents Sea and the relatively warmer waters of the North Atlantic Drift) massive new opportunities have been created by the large petroleum and gas resources under the seabed. Although it is recognised that the exploitation of such resources will be challenging, not least given the potential conflicts between environmental, energy and fisheries concerns, their presence has already changed the way North Norway is perceived (both externally and within its own boundaries). The High North is increasingly used as a synonym for North Norway, but with a crucial shift of emphasis from a problem area to a region of natural resource wealth and opportunity. Even so, spreading the High North dynamic across North Norway remains a major territorial challenge.

1.4.2. Geography of clusters and innovation in Norway

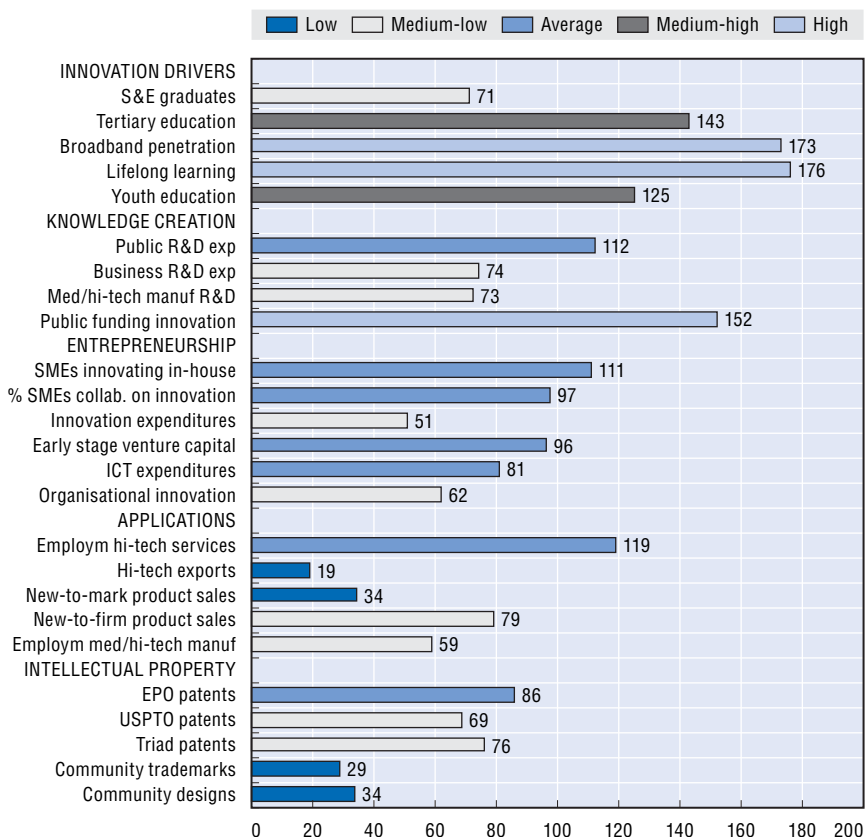
As described in Section 1.1.5 above, Norway's manufacturing sector is rather small, while the raw material based sectors, mainly oil and gas, power intensive industries and services are guaranteeing economic growth. According to Statistics Norway, in the latest Innovation Survey covering the years 2002-2004, only 26% of Norwegian firms all told have been innovative during this period (Statistics Norway, 2005). There are however important differences between firms in relation to size: 62% of firms with 500 employees or more introduced new or significantly improved products or processes while this is true of only 20% of firms having between 10 and 19 employees. Primarily, economic factors obstruct innovation activities, either too high innovation costs or lack of external/internal funding for that purpose. Lastly, innovation is stronger in industry than in services: 37% introduced innovations in the former as compared to only 28% for the latter.

Seen from a European R&D and innovation perspective, Norway seems to be lagging behind other countries, in particular its Nordic neighbours. The European Innovation Scoreboard (EIS) for 2006²⁷ shows Norway's position is below the EU25 average while all the other Nordic countries are at the very top of the list (Figure 1.28). However, according to EIS 2006, Norway's innovation performance is strong for *innovation drivers*, while the output indicators are still at lower levels compared to the EU25 (Figure 1.29). Broadband penetration (18.4% in 2005, while EU25 has 10.6%) and lifelong learning (19.4% in 2005 versus 11% for EU25) are the strongest indicators in Norway, followed by public funding for innovation. The weakest indicators are represented in particular by high

Figure 1.28. **European Innovation Scoreboard 2006**



Source: European Commission (2006a), *European Innovation Scoreboard 2006*, European Commission, Brussels.

Figure 1.29. **Norway's performance compared to EU25 in European Innovation Scoreboard 2006**

Source: European Commission (2006a), *European Innovation Scoreboard 2006*, European Commission, Brussels.

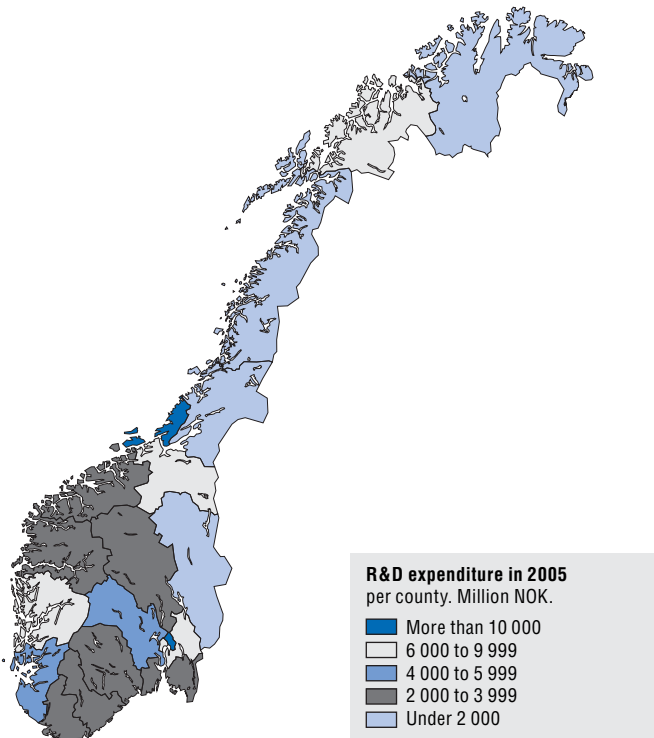
tech exports and new to market product sales. According to the EIS, business R&D expenditures in Norway are below EU25 averages, presenting even a slightly negative trend (from 0.99% in 2003 to 0.82% in 2005). In most recent years (2003-2005) employment in high tech services showed a certain improvement, while early stage venture capital started to decrease.

According to EIS 2006, R&D intensity and other standard innovation measures are also relatively low in Norway, but this is not clear cut and reveals a complex situation. On the one hand, productivity growth has been high, and on the other hand, Norway has developed a solid institutional framework for innovation support. The main challenge seems to relate to companies having done very well by adapting existing technologies to boost their productivity, but seeing little need to produce innovations of their own on account of high risks

and costs. This is partly due to the industrial structure, characterised by small firms and low tech industries. However, on the longer term, growth will increasingly depend on the ability of all firms to develop and integrate innovative processes and products, as petroleum resources start to reduce. In territorial terms, the situation analysed above leads to recognise that the least innovative firms are usually located in regions where economic activity is less developed and average firm size is smaller, mainly in the district policy areas, either remote rural or peripheral.

Expenditure on R&D remains the primary measurement of a country's commitment to increase its knowledge base. From this point of view, Norway does not fare as well as its neighbours. In 2004, 1.8 % of GDP was invested in R&D while Sweden and Finland had over 3.5% of GDP spent on R&D and Denmark 2.6% (Hanell and Neubauer, 2006). R&D is also a geographically centralised activity, concentrated mainly in big cities. As can be seen in Figure 1.30, Norwegian R&D centres are located in and around university centres, with Oslo and Trondheim in

Figure 1.30. **R&D expenditures per county in Norway in 2005**



Source: NIFU STEP and Statistics Norway, 2007.

the lead, followed by Bergen and Tromsø. The lowest levels of R&D are observed in particular in two very low average density areas of the country: Finnmark, but also Hedmark in the south-east.

1.4.3. Clusters in Norway

According to different international measurements, the highest level and intensity of networking is located in the Nordic region: Finland, Sweden, Denmark and Norway. In these countries, the majority of cluster companies actively participate at least in two business networks and about nine out of ten cluster companies take meaningfully part in at least one such network (The Gallup Organization Europe, 2006). In Norway, there are three major business clusters, in the broader sense, competing in the international arena: seafood, energy and maritime. There is also a business-oriented ICT cluster based on strong R&D infrastructure. Some smaller scale clusters, which have an essential role in their surrounding regions, will be developed in Chapter 2. It is remarkable that the leading clusters and leading players within non geographical clusters are located in southern Norway.

The Seafood cluster is primarily located on the west coast around Bergen and Stavanger. In this sector, companies are collaborating to develop innovative solutions to access global markets, in face of tough Asian competition in particular and to develop fish farming with different species. Profitability, size, type of production and location of firms varies. To maintain cutting edge competitiveness, research, knowledge production and knowledge distribution are central features of the sector's strategy. Seafood North Norway is set out to contribute to the establishment of new sea farming species (blue mussels and sea urchins in particular). The project involving the Ministry of Fisheries and Coastal Affairs and a number of public and private partners, aims to develop overall regional knowledge and experience related to network-based innovation processes.

In addition to the major international oil producing and distribution companies,²⁸ Norwegian oil and gas clusters consist of internationally competitive supply and service companies covering the entire value chain: from exploration via development, production and operation to decommissioning. Approximately 80 000 people are employed in the Norwegian petroleum sector and 60 000 are estimated to be directly involved in the supply and service industry. The skills, experience and technology developed on the Norwegian Continental Shelf are utilised by the oil and gas industry all over the world. An example is the Norwegian-based sub-sea industry that has a leading position internationally with a 70% to 80% share of the global market. Geographically, the cluster operates primarily out of Stavanger followed by Hordaland including Bergen and Kristiansund but has antennas in different parts of the country, in particular in the north. One of the

challenges here is however to engage the industry into creating more jobs in Finnmark until the full impact of Barents Sea reserves exploitation can be felt (see Section 1.1.3) around 20 years from now.

Norwegian maritime enterprises together form an internationally competitive, expertise-based constellation of industries. The main centres of the cluster are located in several locations in the south: Oslo, Stavanger and Kristiansand and Møre og Romsdal in particular. Strong ties based on know-how and competence also exist between the maritime cluster and other industrial-manufacturing clusters in Norway. In marine technology, one group is a worldwide supplier of technology-based products and advanced, integrated solutions for customers in oil, gas, energy, and process industries (The Aker Group). It is also a major European shipbuilder and a significant participant in the fisheries industry. Among hi tech companies in the field of marine technology, Norway also has leading players (Seadrill).

The core of the Norwegian ICT cluster is situated in the Oslo region, where the major operators are headquartered. Sixty per cent of Norwegian information and communication technology positions are found around Oslo (Oslo Teknopol, 2006). ICT companies, research institutions, and professionals are generally found in three clusters in the proximity of Oslo; the Gaustabekk Valley, the IT Center at Fornebu and the Kjeller Technology Park. The three above listed IT clusters, close in proximity, are interlinked via infrastructure to facilitate research among organisations. Secondary research parks have also been established and are located in various cities around Norway. This set of research parks is positioned to provide business incubation environment, research, and linkages with other organisations and firms.

Raufoss is today a successful automotive cluster in south Norway with industrial activity that started more than 100 years ago in the defence sector. Manufacture of automobile light parts began in 1956 and specialisation in aluminium parts emerged 10 years later. The cluster today works for major car manufacturers world wide, employing 3 000 people in 30 different companies. Eight-five per cent of its production is exported. The continued success of Raufoss, in spite of the fact that Norway is a high cost country, which could be a handicap on the international market, can be explained by high productivity gains. The cluster successfully applied for funding from the Norwegian Centres of Expertise programme. Amongst the different projects that have been decided within this qualification are the creation of a “teaching factory” and processes to facilitate R&D and technology transfer. Developing new models for co-operation between industry, research and education partners is also a constant preoccupation of firms located in Raufoss, so as to maintain a high degree of efficiency.

Aside from the heavyweight clusters indicated above, a certain number of cluster initiatives have been taken in Norway with the encouragement of national and regional authorities, within programmes that are developed in Chapter 2. The example selected below shows that clusters can operate cross sector (in this case between agriculture and fisheries) and that such initiatives can well be taken within small city environments. BIOINN, the Norwegian Biotech Cluster Initiative focused on livestock and plant genetics, started in 1998. It is located in and around the city of Hamar (Hedmark) with a population of around 26 000 inhabitants. The region has leading trades in animal breeding and conversion and in plant/tree breeding and Hedmark University College is focused on education in these fields. The launch of the cluster on the basis of a partnership is the result of a joint effort by the county council, the municipality, the University College, farm enterprises and researchers extended to other parts of the country (fish species). It specialises in cryo-genetics, making its findings through a bio bank available for agriculture (cattle breeding), and aquaculture (salmon).

Between 2003 and 2006 BIOINN was a major project within the Cluster development programme ARENA supported by Innovation Norway, RCN and SIVA (see next chapter). A bio-incubator was created and six new spin-offs have developed over the last three years. A “bio house” facility that serves as meeting place and show-case is under construction with help from the municipality. To facilitate future growth within an adapted framework, BIOINN was established as a foundation in June 2006. This will further co-operation projects between market participants in biotechnology, thanks to joint public and private financing. BIOINN will also be submitting to the Norwegian Centres of Expertise Programme (see Chapter 2). This successful project shows that a rural area with low population density can promote value-added innovation-based projects on the basis of local assets, with far wider impact than the local area itself. Contrary to many assumptions, this type of innovation does not always require an urban environment.

1.4.4. Public innovation resources

Norway's tertiary education system, comprising six universities and 25 university colleges is a relatively large one. The six universities, in which around a third of all students are enrolled, are located in Oslo, Stavanger, Bergen, Trondheim, Tromsø and Aas (Norwegian University of Life Science) close to Oslo. The 25 university colleges, regrouping 47 % of the students are well spread over the country, with presence in each county (Ministry of Education and Research, 2003). In addition there are 21 private colleges receiving state funding plus a small number that do not. These colleges account for 15% of the students. There are also six small specialised university level institutions offering courses in fields such as architecture.

The university and college sector holds a large share of R&D activities in Norway, with around 28% of the total (which is to be compared to an OECD average of 19%). All this research is highly dependent on public sources. The university and specialised university institutions have a considerably higher level of R&D activity than the university colleges which receive little in the way of competitively awarded research grants. Moreover, the university and specialised university institutions have been given special responsibility for long-term basic research and researcher training.

Norway's independent institute sector encompasses over 200 institutions. Of these, approximately 70 comprise institutes solely devoted to research. The institute sector consists of organisations that are part of neither the higher education sector nor the industrial sector. The share of R&D activities executed in the institute sector largely exceeds their average level in OECD countries; *i.e.*, approximately one-fourth of the national R&D volume against 11% for the OECD area. This sector is relatively specialised, conducting most of the publicly funded R&D in engineering, aqua related science and agriculture.²⁹ The research institutes having R&D as their primary focus account for close to 80% of this sector's R&D activities. The remaining research is carried out by public administrative agencies, museums and archives or health institutions. The Research Council of Norway (RCN) has the strategic responsibility for the sector, defining the framework and objectives for various forms of government funding. The Research Council prepares annual reports on the activities of the research institutes on commission from ministries.

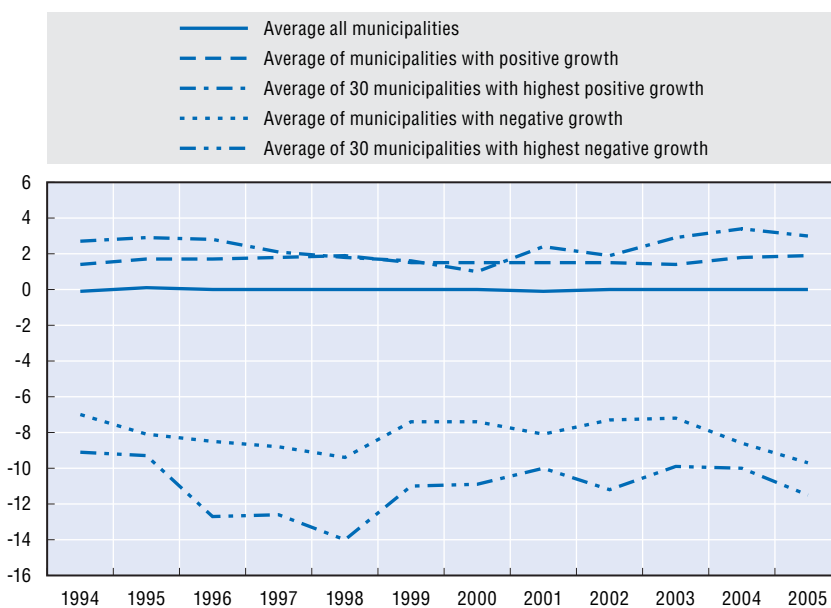
Research institutes play a strong role in the Norwegian research system concerning the performance of applied research. The most important research institute is SINTEF (Foundation for Scientific and Industrial Research at the Norwegian Institute of Technology), the largest independent research organisation in the Nordic countries, mainly based in Trondheim. Every year, SINTEF supports the development of around 2 000 companies (2006 annual report). Its goal is to contribute to wealth creation and the sustainable development of society, generating new knowledge and solutions, based on research and development in technology, the natural sciences, medicine and the social sciences. Co-operation with institutes and universities is extensive: since its inception in 1950, it has a long history of close collaboration with the Norwegian University for Science and Technology (NTNU), located in Trondheim. SINTEF owns Sinvent (commercialisation office), helping spin off companies and start-ups, located in Trondheim next to the NTNU TTO (Technology Transfer Office).

1.4.5. Areas of population decline in Norway and access to services

Demographic decline and distance to services

More than half of Norwegian municipalities have experienced population decline in the last 10 years, mostly caused by out-migration of people of working age going with their families to more urban areas. They are leaving behind an ageing society with different and costly demands on services. Most problems connected to negative population growth have to do with out-migration. Impact is acute in those municipalities with negative population growth as the rate has varied between minus 7 to minus 9.7 in the period between 1994 and 2005 (see Figure 1.31). The attractiveness of these areas is eroding slowly. Alongside demographic problems, severe climate conditions, difficult geography and long distances pose challenges to the stated goal of equalising living standards among citizens.

Figure 1.31. **Average net migration per 1 000 inhabitants between 1994-2005**



Source: Statistics Norway.

The decline of the population has not been homogeneous for all age groups. Those citizens in school age or in productive age are underrepresented, while segments of the population over 67 are over-represented. According to Statistics Norway, the population is ageing at a steady pace. However, the share of elderly people of 67 or more is greater in municipalities with negative population growth (see Table 1.13). It stands at 16.6% against 13% for all

Table 1.13. **Proportion of population of 67 or more in 2006 by municipalities**

	Population 67 or more
All	13.0
With negative population growth	16.6
With positive population growth	12.2
30 with highest negative population growth	17.0
30 with highest positive population growth	11.7

Source: Statistics Norway.

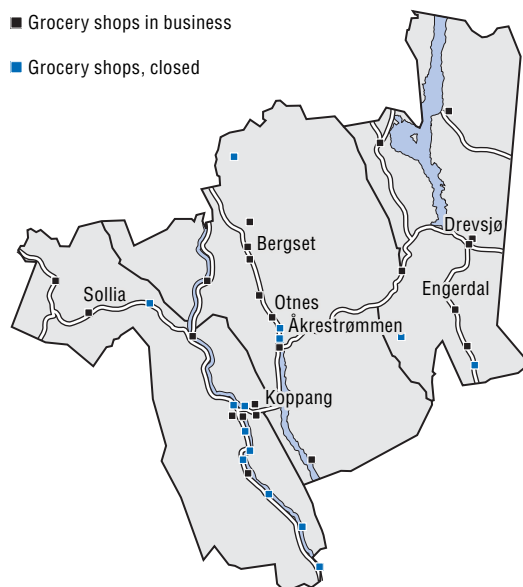
municipalities and still higher (17%) in those areas that have lost more inhabitants during the last decade. Such a trend puts pressure on the needs of these elderly inhabitants in terms of public services. Adequate availability and capacity of retirement homes and care for the elderly are today the major issue in terms of public service delivery in many rural areas in Norway.

Low population density and negative demographic growth of municipalities occurs in large municipal units, which constitutes an additional difficulty in terms of service delivery. Norwegian municipalities are huge, some of them with more than 3 000 km² and no more than 3 000 inhabitants. Distances between the north and south and between the western and eastern municipal borders can go beyond 100 km. These long distances and densities of one person or less per km² pose tremendous problems in offering equivalent services to everyone. In these low density and low population areas, services demand special attention in terms of production, organisation, cost control and efficiency. In areas with higher population density, economies of scale are easier to achieve.

Declining offer of services: users view point

A common feature of areas with population decline is the ongoing closure of schools, post offices, railway stations, grocery shops, petrol stations and other local private and public services. Between 2001 and 2005 the closure of primary and lower secondary schools amounted to 80 in municipalities with population in decline. There has also been a dramatic reduction in the number of post-offices throughout the country, both in urban and rural areas. Ordinary post offices have been replaced by post office services in shops. However, this has led to better access to postal service in many ways, because the opening hours have increased. Twenty-three grocery shops closed in the Midt-Østerdal region since the 1960s (see Figure 1.32) and similar situations exist in other regions with the same demographic problems. This is not a strictly rural problem as small shops close down everywhere and retail is concentrated in bigger malls. However the impact of such closures is felt more strongly in non-urban areas, even if people tend to be more mobile, willing to travel greater distances for services.

Figure 1.32. **Grocery shops from 1960 to 2006, Midt-Østerdal region, (Hedmark county)**



Note: Former shops and grocery shops still in business, Midt-Østerdal, 2006 (filled squares).

Source: Aasbrenn, Kristian (2006), *Organizing Service Delivery in Areas with Population Decline: The Norwegian Approach*, Institute of Social Sciences, Hedmark University College.

The disappearance of service points has several implications. Distances between users and service providers increase and reach levels that cannot be easily overcome either by users or by providers unless innovative solutions are offered. Further, the sense of the community around centres (schools, grocery shops, post offices) in which people can meet and exchange news and eventually help becomes looser. Finally, security feelings start to be replaced by concerns that children will not receive an adequate education or by the fear that the ambulance will not reach the patient in an emergency. Overall feelings of increased isolation are incentives for departure of the youngest and certainly contribute to diminishing attractiveness of certain areas, whatever natural amenities they have to offer.

Distances and scarce availability of certain services explain why satisfaction rates differ. The results of the TNS Gallup (see odin.dep.no) surveys (Aasbrenn, 2006) show that in the periphery, the population is less satisfied with accessibility to shops and the commodities of bigger centres, hospitals, higher education, leisure and cultural services, with the availability of public transportation and with the quality of some health services in remote areas. Elderly people from rural areas tend to score higher in the satisfaction rates than young people from the same area and elderly people from urban areas.

This result would imply (Aasbrenn, 2006) that the latter should be less demanding than others with services for the elderly. Admitting this, it will be a challenge when people of younger generations (more demanding today in terms of overall public service offering) which continue to live in these areas, grow older and continue to expect higher levels of services wherever they live.

Notes

1. The term Nordic is used here rather than Scandinavian. The latter equals in a strict geographic sense to Norway and Sweden alone (the Scandinavian Peninsula). However, in common parlance and functionally Denmark is also often included. In addition to the three former countries, “Fennoscandia” includes Finland. The term “Nordic countries” or “Norden” additionally covers Iceland, and often also the autonomous areas of Westnorden (Greenland and the Faeroes).
2. In the Nordic countries, localities are defined as a group of buildings located less than 200 meters apart (in Norway less than 50 meters), comprising at least 200 inhabitants. Using this common Nordic morphologic method of defining urban areas does not alter the above-mentioned classification. If the definition for a locality used in other Nordic countries is applied to Norway (distance between buildings of 200 metres instead of 50 meters), Norway reaches an urbanisation rate of 82.6%.
3. Agriculture, fishing and forestry play an important role in rural areas although overall primary sector employment has fallen in all countries. In Norway, these activities generally receive strong policy support, providing a significant contribution to the economy of certain areas. Their direct territorial impact is however difficult to measure but their role in regional development is well recognised.
4. All urban data from Statistics Norway, 2006. Statistics Norway defines as urban all densely built up settlements over 200 inhabitants. There were 905 such settlements in 2006.
5. Statistics Norway defines as periphery, regions where urban settlements have a population of less than 5 000 inhabitants (13% of the population). Periphery, sparse population and remoteness, with related issues of access to public services and more difficult conditions for economic development are frequently mentioned in this review. The latter terms apply to mostly rural areas but the former, in its traditional geographic acceptance (in this case, the “northern periphery”) can well comprise urban settlements of significant size (e.g., Tromsø and Bodø in North Norway).
6. Municipalities are used here as proxy for core cities. In the text they are referred to as “core cities”.
7. City regions are defined by the Ministry of Local Government and Regional Development as regions where the main urban settlement has at least 50 000 inhabitants.
8. Includes crude oil and natural gas (extraction and pipe transportation), mining, power supply, water supply and construction.
9. Labour costs in a common currency were 25% above those of trading partners in 2004 (OECD, 2005c).

10. Health spending jumped significantly in 2001 when additional costs on long-term care by local governments was for the first time included in health spending.
11. This section is based on input provided by the Ministry of Local Government and Regional Development and the Statistics Norway website, 2006.
12. In statistical terms, “non-western” includes the new EU members since the 2004 enlargement.
13. These figures take both first and second generation immigrants into account.
14. Municipalities are responsible for these courses: up to 850 free lessons for those with primary or secondary education and 3 000 free lessons for those with a lower education level. Since the beginning of 2005, 300 hours of language training are required for adult immigrants and refugees in order to obtain a settlement permit and Norwegian citizenship (see OECD, 2005a).
15. OECD Territorial database. Percentages for Norway: 2001; for Sweden and Finland: 2003.
16. Canada, Japan and Korea attain rates of around 50%.
17. The figure for Oslo may be overestimated: many companies are established by residents from nearby areas.
18. The regression analysis is a statistical technique to test how much of the observed difference in the dependent variable (i.e., productivity) is due to the effect of a set of explanatory variables (i.e., R&D, skills and OECD Regional Typology).
19. The links between local and regional firms and academic staff only involve a small proportion of the latter (OECD, 2006d).
20. Bryggen (Bergen old wharf, Hanseatic League), Urnes Stave Church (Sogn og Fjordane), Roros mining town (Sor Trondelag), Alta Prehistoric Rock Art (Finnmark), and the Vega archipelago cultural landscape (Nordland).
21. However, foreign overnights include both recreational tourism and business trips. The professional part of international travel is roughly proportional to the size of the nation and the strength of its industries. According to this, Sweden has the largest potential of international guests in the region, but not necessarily in terms of tourism.
22. Norway is well equipped for this purpose as it maintains a network of tourism offices abroad, merged within Innovation Norway since 2004. A national strategy for the tourism industry is now being discussed between nine ministries and will be made public mid-2007.
23. In Buskerud, Kongsberg (defense, maritime and automotive); in Ostfold and Halden (paper and ICT).
24. The original periphery index was developed by the Institute of Transport Economics and the Norwegian Institute for Urban and Regional Research and was subsequently amended slightly by the Norwegian authorities. The index is built up from the municipal level and allows comparisons to be made at a range of spatial levels including labour market regions, economic regions, counties and NUTS-level areas.
25. For a broader view of the northern periphery see Gløersen, et al., 2006.
26. This statement is drawn from the website of the Ministry of Foreign Affairs. See also Ministry of Foreign Affairs (2005).

27. The EIS is the instrument developed at the initiative of the European Commission, under the Lisbon Strategy, to evaluate and compare the innovation performance of the EU member states. The EIS 2006 includes innovation indicators and trend analyses for the EU25 member states, plus the two new member states: Bulgaria and Romania, as well as for Croatia, Turkey, Iceland, Norway, Switzerland, the United States and Japan.
28. Such as the giant formed by the merger of Statoil and Norsk Hydro, one of the biggest firms in the Nordic area.
29. Most of publicly funded R&D within humanities and medicine are conducted in higher education institutions; R&D in natural science is about equally shared between the HE sector and public research institutes.

Chapter 2

Assessing Regional Policies

2.1. Evolution of regional policies in Norway

2.1.1. Long-term development of Norwegian regional policies¹

Regional policy in Norway began in the post-war period in response to devastation produced by the conflict and, specifically, the need to reconstruct the northern parts of the country where damage to economic and social infrastructure had been very severe. Initial policy responses tended to be mostly local in scope, to answer immediate needs. In 1951, a more strategic view was introduced with the North Norway Plan, followed over the next decade by economic development measures in other parts of the country. By the early 1960s, the need for a central institution to co-ordinate the range of locally based business support schemes appeared. To this end, a Regional Development Fund was set up in 1961 under the auspices of the Ministry of Local Government and Labour. More generally, regional policy was seen as a way to balance government efforts to stimulate industrial growth in the south and east. As such, regional policy was closely linked to national economic planning, with the goal of ensuring a more balanced and equitable territorial distribution of national income.

During the 1960s and into the 1970s, the goal of ensuring uniform levels of service provision in all regions meant that narrowly defined regional policy measures came to be complemented by other government policies with broader regional development effects. There was reliance on central planning and an associated rapid increase in public sector employment in many peripheral regions, including in the state-owned sector. From the mid-1970s, budgetary and broader policy concerns meant that this top-down approach began to be replaced by bottom-up efforts, based on ideas of self-development and the mobilisation of regional resources. At the same time, there were broader trends to decentralise aspects of policy, giving local authorities greater input over funding.

By the mid-1980s and into the 1990s, policy had taken on more of a market orientation, with an emerging focus on endogenous growth, knowledge-based development and the stimulation of entrepreneurship. Concerns emerged from the mid-1990s about out-migration from the periphery, with associated welfare and development implications. Alongside these periphery-oriented issues, attention came to be focused on settlement patterns and broader territorial planning issues and on the role of the regional level in economic development (with the introduction of regional strategy

development and programming in line with developments within the EU). Regional competitiveness also became an increasing part of the policy agenda.

In broad terms, the post-war period has seen an initial policy emphasis on equity expand to consider also growth aspects and territorial planning, although equity considerations remain fundamental. In parallel, an associated widening of the spatial focus of policy from designated and mainly peripheral areas to a policy involving all of Norway's regions was developed, although the funding emphasis continues to be strongly in favour of peripheral districts and rural areas. A broadening of the instruments of policy from spatially targeted regional aids to measures in support of the business environment and more general policies with an impact on regional development took place at the same time. Lastly, there was a move away from policies developed and implemented solely by central government. This was carried on through the establishment of national implementation agencies (SND² in 1993 and Innovation Norway in 2004) and, also in the last few years, the regional distribution of significant policy funding.

The period has also witnessed important changes in the context for regional development. Whereas, in the early years, Norway tended to be viewed as a relatively remote country relying mainly on traditional resource-based sectors (fishing, agriculture, hydroelectricity) with a sprinkling of industry (steel, shipyards), it has more recently gained affluence and global influence through other natural resources (petroleum and gas). A second important contextual development has been the increasing importance of globalisation and associated competitiveness pressures in recent years. These new endogenous and exogenous factors have had a major influence on recent policy developments.

2.1.2. Recent policy developments³

The evolution of district and regional policy in Norway can be characterised by broad consensus and small changes. A new approach to regional development was introduced at the beginning of 2002, following a change in government at the end of the preceding year (Ministry of Local Government and Regional Development, 2002). The policy involved: a focus on balanced development, aiming for population growth in all regions; a shift away from selective, centrally administered, grant-based assistance in favour of broader bottom-up initiatives which reflected local needs and requirements; related, a regionalisation of regional development budgets and responsibilities; a greater stress on innovation, both nationally and in the regions; an emphasis on measures to improve the business environment (tax cuts, infrastructure provision) rather than on direct business aid; and changing administrative responsibilities for regional development (with the county level taking the lead in regional partnerships charged with developing and implementing

regional development plans). In line with this strategy, responsibility for economic development budgets (under budget heading 551.60) was devolved from the Ministry of Local Government and Regional Development to the counties from 2003. As a result, four-fifths of the Ministry's annual budget now goes directly to the counties.

In a related development, Innovation Norway was set up in 2004 to bring together the SND, the Norwegian Tourist Board, the Norwegian Export Council and the Government Consultative Office for Inventors. Its core aim is to support business and entrepreneurship in all regions of Norway, while helping to release the potential of municipalities and counties to contribute to innovation, internationalisation and promotion by partnership approaches with the private sector. Compared to SND, Innovation Norway has less direct regional support channelled through it, now that the regional aid budget is passed first to the county level. Nevertheless, Innovation Norway remains an active and important regional policy player, in particular through involvement in the development and implementation of regional development plans and in delivering support at the regional level.

The 2005 White Paper on regional policy⁴ built on these policy developments and confirmed the new way of thinking about regional policy, by explicit reference to competitiveness concerns within traditional broader district policy objectives. It thus stated that *"The Government's regional policy objectives are to maintain the main features of the settlement pattern and to release the growth potential in all parts of the country. ... The Government also emphasises that policy initiatives to achieve regional policy goals should also strengthen Norway's international competitiveness."* To achieve these objectives, a number of strategies were to be followed, namely: establishing a good macroeconomic framework for industrial policy; differentiating policy in the regions, based on decentralisation and co-operation; strengthening the basic conditions for growth regions; providing a suitable environment for innovation, restructuring, employment and profitable activities; and laying the foundation for good service provision and attractive areas.

Different from previous approaches, the 2005 White Paper on regional policy put an emphasis on innovation, regional growth and an all-country approach. The focus was on the promotion of regional development in all regions through the regional differentiation of policy. On the other hand, important traditional features of policy remained – in particular, the stress on maintaining settlement patterns and the continuing favourable treatment of sparsely populated and peripheral areas (the so-called "districts"). Finally, by linking population settlement issues to development of the industrial structure, the White Paper increased the importance accorded to city areas in regional policy. It not only sought to achieve a more balanced distribution of growth between city areas in different regions and between city areas of

different sizes, but also wished to see smaller and medium-sized cities in particular developing as both attractive living areas and as locations suitable for city-oriented businesses.

The new government formed after the September 2005 elections placed regional policy high on the agenda. A June 2006 White Paper (St.meld.nr.21, 2005-2006) had a similar broad coverage as its predecessor but, at the same time, underlined even more strongly the priorities of district policy, implying increased state support to sparsely populated areas.⁵ Reflecting this, a particular focus of the White Paper is on strengthening the key conditions which underpin business development and stable settlement structures and the core role that municipalities can play in this. The White Paper further stresses the importance of traditional policy measures, including a differentiated social security concession in the most sparsely populated areas. On the other hand, it recognises that more general support to promote business development and potential is also significant. Amongst a range of innovation and enterprise-related measures, the proposal of the previous government to introduce a new innovation-oriented Centre of Expertise Programme was maintained.

The 2006 White Paper also emphasises the role of partnerships in regional development, the need for enhanced co-ordination across sector policies and the importance of infrastructure provision (especially for transport). In addition, it highlights the development of specific measures for the most vulnerable areas, those going through a restructuring process and/or experiencing a decline in population. The different policy emphases of the new government have been reflected in recent budgetary developments (see Table 2.1). In particular, there has been a very significant increase in local government funding, with 5.5% growth between 2005 and 2007. Regional development support has also been markedly enhanced; there was a 17% increase between 2005 and 2006 and a further 10% increase between 2006 and 2007, once reintroduction of the social security concession in 2007 is accounted for.⁶ As indicated above, these allocations are coherent with recent

Table 2.1. Ministry of Local Government and Regional Development budget 2005-2007

(NOK million)	2005	2006	2007
Regional development	2 451	2 868	2 746
Local government	48 681	53 872	56 472
Housing and building	16 099	16 676	16 702
Planning and administration	262	149	182
Total	67 493	73 566	76 103

Source: Ministry of Local Government and Regional Development budget proposal, 6 October 2006.

statements relating to even stronger support for “classical” district policy measures but they do not represent a major policy shift as they are in continuity with the evolution of Norwegian regional policy, which is progressive. This continuity is also illustrated by the fact that the competitiveness concerns and policy measures of the previous government have been maintained.

2.1.3. Coverage of regional policy

Notwithstanding these various developments and policy shifts, there has been considerable and long-standing stability in the broad objectives of regional policy in Norway. This is confirmed by the three key policy objectives highlighted in the 2006 White Paper, the ambitions and challenges of which are underlined in Box 2.1 (St.meld.nr.21, 2005-2006): to provide equal living conditions across the country, to maintain the main features of the settlement pattern and to focus on and develop regional strengths. These objectives impact on coverage and delivery of policy, analysed hereafter.

In considering the coverage of regional policy in Norway, an initial distinction has to be made between measures which explicitly target regional

Box 2.1. 2006 regional policy ambitions and challenges

Three policy **ambitions** are stressed in the White Paper:

- To give people a real independent choice in where they want to live; to give priority to communities with declining population and employment opportunities and to generate prosperity of all local communities.

Six specific policy **challenges** are highlighted:

- To trigger growth in all parts of the country.
- To provide access to quality services in every part of the country.
- To create a dynamic environment for new competitive businesses to succeed outside urban areas.
- To create optimism in the areas with declining population and loss of jobs by adequate support through a palette of regional and rural policy instruments.
- To make small towns attractive places to live and work (especially for young people and women).
- To make medium-sized cities attractive alternatives to large cities.

Source: St.meld.nr. 21 (2005-2006), *Hjarte for heile landet: Om distrikts- og regionalpolitikken*. (Ministry of Local Government and Regional Development, *The Rural and Regional Policy of the Norwegian Government – summary in English*), Report to the Norwegian Parliament, 2006, Publication number H-2190 E, Oslo.

development and those where the regional impact of policy (though often significant) is not a core policy focus. In the Nordic context, this distinction is often characterised as that between “narrow” and “broad” regional policy. Broad district policy comprises sectors where district policy is not the core policy element, but an important part of it, for example, in agricultural policy or transportation and communications policy. A third category is represented by policy areas without district policy components, but important regional impact, such as petroleum extraction and processing and activities based on the use of hydroelectric power. The corresponding components are developed in Box 2.2 below.

First and foremost, there is what is known as district policy in Norway. It comprises distinct elements discussed in Section 2.2. They include: the automatic award of the differentiated social security concession, with a view to reducing employment costs in designated sparsely populated areas facing permanent disadvantage; compensation for those areas where this concession was removed or reduced post 2003 as a result of conforming with EU-EFTA guidelines and practices; the provision of regional aid in designated areas; measures to support business development infrastructure; and targeted transfers to municipalities within designated aid areas. Also to be noted are specific measures to tackle issues relating to weak settlement structures – including aid for restructuring processes in the most vulnerable areas and support for projects relating to entrepreneurship which encourage young people and women to settle or remain in peripheral localities.

Within district policy, specific attention is given to the northern periphery. On the one hand, this takes the form of higher award rates than found elsewhere within the designated areas. On the other hand, additional measures are available in all or part of North Norway, including the aid package for the Action Zone of North Troms and Finnmark and the NT programme (for innovation and technology in North Norway). Extra municipal transfers are also made available via the North Norway Grant. The support package for North Norway is considered further in Section 2.2.

A third component of regional policy highlighted in the 2006 White Paper consists of more general measures to promote regional growth and competitiveness. Such support is reviewed in Section 2.3. This includes initiatives to improve development conditions for innovation, entrepreneurship and firm expansion (such as the provision of innovation-oriented business infrastructure and the new Centre of Expertise programme); investment-related support such as enhanced access to venture capital funds; measures to promote new firm formation and entrepreneurship; and the strengthening of the role of municipalities in local economic development.

Box 2.2. The components of Norwegian Regional Policy

A. Measures targeted explicitly at regional development (narrow regional policy)

A.1 District policy

Policy directed at sparsely populated and remote areas with long distances to population centres and large markets. Traditionally, target areas have been the designated aid areas. They are not simply rural areas, but include urban centres in the north.

A.2 Northern periphery policy (within district policy)

As the preceding, but targeted specifically at North Norway or, within North Norway, at the Action Zone of North Troms and Finnmark. Award rates are higher than elsewhere within the designated areas and additional policy measures are available over and above those provided elsewhere in the designated areas.

A.3 Measures to promote regional growth and competitiveness

Policy not targeted specifically at designated areas (all-region approach), but measures are often regionally differentiated (tailored to the specific requirements of specific regions). Such measures also often have an urban orientation, though this is not always explicit. They also extend to broader measures to make towns and cities attractive places to live and work.

A.4 Measures to co-ordinate the above policies and the sectoral and related policies highlighted below.

This includes policy co-ordination at the regional level (often via regional programmes and plans) and nationally (across sectoral ministries) as well as national-regional co-ordination.

B. Measures where regional impact, though significant, is not a core policy focus (broad regional policy)

B.1 Sectoral policies

Including policies related to health, education, transport, agriculture and fisheries, culture and tourism.

B.2 Fiscal equalisation

Broader transfers under the general purpose grant scheme with a view to facilitating equal service provision across the country by compensation of narrow tax bases and/or higher costs for public service delivery.

C. Policy areas without district policy components but with important regional impact

Petroleum extraction and processing; manufacturing activities related to hydroelectric power.

Source: OECD, from a presentation by the Ministry of Local Government and Regional Development, 2007.

A less explicit element of narrow regional policy is urban-oriented support.⁷ While there is no specific urban programme along the lines of the Regional Centre Programme in Finland (see OECD, 2005e), the overall goals for regional policy make clear the intention to have towns and cities as attractive places to live and work. The Ministry of the Environment, jointly with the Ministry of Local Government and Regional Development has emphasised the need to integrate environmental concerns in urban planning and to enhance city centres through the Sustainable Cities programme.⁸ Today it is the innovation and competitiveness components of regional policy that clearly have an important urban dimension as will be developed further.

Moving beyond narrow regional policy, many sectoral policies in Norway have significant regional implications. One example is transport. For decades, great weight has been put on the regional and rural dimensions of transport infrastructure. Under the most recent National Transport Plan (NTP),⁹ one of the core objectives is to improve traffic flows within and between regions, so as to promote development of viable rural areas and growth-oriented housing and labour markets while meeting transport needs of business and industry. This involves improving the road system, facilitating the provision of ferry services, building new bridges and tunnels, removing infrastructure bottlenecks and ensuring the operation of the system of 28 regional airports (over half in the north and the remainder mainly along the western coast). Most of these airports serve population centres with poor surface transport links and significant travel times to the next airport.

Government support to different types of transportation is provided through purchase of commercially unprofitable transport services (passenger railways, ferry services and regional airline services) via competitive tendering, with attached public service obligations. In the case of airports there is cross-subsidising through a state-owned company (Avinor) that compensates deficits of non-profitable regional airports. A new NTP is in preparation for 2010-2019. In line with government priorities, it will increase the weight given to secondary state roads and to avalanche/landslide protection, thus further improving the viability of rural areas.

Agriculture policy also has clear regional implications. The most important production areas are situated in East and Mid-Norway as well as in Rogaland in the south. From a post-war focus on productivity, food security and improving farmer incomes, agriculture policy progressively incorporated environmental issues and rural development concerns during the 1980s and 1990s (Almås, 2004). The multifunctional nature of agriculture is now emphasised, including issues related to the viability of rural communities, environmental and cultural amenities and the sustainable use of resources (OECD, 2005f). Both agricultural policy and support schemes have rural (and

thus regional) development as a significant policy goal: regionally distributed production is an important strategy under agricultural policy.

Support schemes include price and production subsidies, support for organic agriculture, investment support, rural development programmes and environmental funds. An analysis of the regional policy component of agricultural support found that schemes aimed solely at regional goals were relatively small, accounting for only 5% of the agricultural support budget (Hegrenes, et al., 2002). This included regional price support to the milk and meat sectors to allow production to take place in more difficult and remote areas, including in the west and north. On the other hand, much of the remaining support has important indirect regional effects, with agricultural policy contributing significantly to employment in Norway's sparsely populated areas.

Fishing and fish farming, activities in which Norway is a world leader, also have obvious regional impacts, providing vital employment opportunities for local settlements in coastal areas, particularly in the north. In many Norwegian coastal municipalities, fishing and farming jointly explain the higher than average levels of employment in the primary sector. In 2002, fishing employed almost 7 500 people in Arctic Norway, 3.5% of the total employment of the area (Glomsrod and Aslaksen, 2006). Fish processing has traditionally been particularly important for the employment of women. Where such jobs are lost under the pressure of international competition, mostly from Asia, coastal communities can come under serious depopulation pressures. Fish farming is developing regularly and extending to new species but this high added value activity is not job-intensive, so it cannot constitute alone an adequate answer to economic downturn in coastal communities.¹⁰

The broader impact of sectoral policies on regional development is well-recognised in Norway, not only in respect of transportation, agriculture, fishing and tourism but also petroleum extraction and processing as well as manufacturing industries related to hydroelectric power (such as the metal and chemical industries and pulp and paper). Reflecting this, the 2006 regional policy White Paper analyses the impact of sectoral policies on district development. In addition, a new advisory sub-committee (Government Sub-committee on Rural and Regional Policy) was established in 2005 to strengthen co-ordination between sectoral priorities and regional development. Its permanent members include the Ministers of Local Government and Regional Development (chair), Fisheries and Coast, Modernisation and Administration, Cultural and Church Affairs, Agriculture and Food, Trade and Industry, and Transport. The establishment of the sub-committee was in response to policy co-ordination challenges examined in Chapter 3.

Coverage of policy implies examining the distribution of funding between different components. The regional policy budget of the Ministry of Local Government and Regional Development aimed specifically at the districts has ranged from NOK 1 billion to NOK 1.5 billion in recent years. Most of this relates to regional investment grants and loans and other forms of regional aid. Moving beyond such narrow district policy support, broader measures targeted at the districts account for between NOK 10 billion and NOK 15 billion annually. The most important items under this heading are the regionally differentiated social security concession, certain regionally targeted agricultural measures and municipal transfers to designated aid areas via the Regional and North Norway Grants. Finally, as discussed above, still broader forms of (sectoral policy) support have regional impacts but no intended regional targeting. While it is difficult to gauge the volume of such sectoral spending, it is estimated by the Ministry of Local Government and Regional Development to be some 10 times greater than broad district policy and perhaps 100 times more than narrowly defined district support.

2.2. Policy for peripheral and declining areas

Norway has a very broad spectrum of regional policy instruments at its disposal. The breadth of the policy response reflects the complex nature of the territorial challenges (see Section 1.4) and, in particular, the fact that many of Norway's problem regions are facing permanent hardship and disadvantage leading to population outflows and pressures on settlement structures. Setting this against the key policy objectives – especially, the aim to provide equal living conditions across the country and to maintain settlement patterns – it is understandable that there is a considerable focus on the transfer of funding to the most disadvantaged areas and on ensuring that such support is aligned with the nature and severity of the regional problem. The periphery index discussed in Section 1.4 has been instrumental in designating the chosen areas and in differentiating the available support to this end.

At the core of policy for peripheral and declining areas are the designated problem region maps. These have been developed under the 2007-13 regional aid guidelines which apply throughout the EEA and aim to control the award of national regional aid.¹¹ Under the guidelines, two types of designated area maps are potentially permissible. One relates to national regional *investment* aid designed to support the development of the most disadvantaged regions by aiding investment and job creation. The other concerns areas where the structural handicaps of a region are so severe that regional investment aid and related horizontal measures (including innovation-oriented support) are not considered sufficient to promote regional development and where regional *operating* aid is allowed.¹² Given the severity of the territorial challenges in Norway, both forms of aid are found. The differentiated social security

concession is an operating aid and is the most significant component of Norwegian regional policy (narrowly defined). It involves annual revenue foregone of NOK 8.5 billion. In contrast, the regional investment aid package has an annual spend which varies between NOK 1-1.5 billion. Also important for the peripheral areas are the spatially targeted Regional and North Norway Grants which transfer significant funding to municipalities within the designated areas, over NOK 2 billion per annum. Finally, there is smaller-scale support which responds directly to concerns about weak settlement structures. These various measures are considered further below, focusing first on those which apply across one or other of the designated (sparsely populated) areas and then on policy instruments targeted at the north.

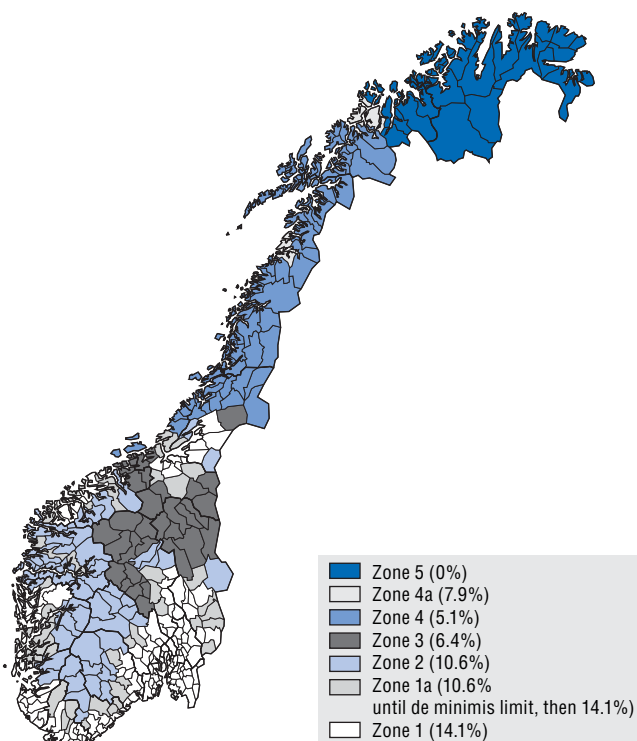
2.2.1. Policy instruments targeted at sparsely populated areas

Differentiated social security contribution and related support

A system of regional differentiated social security contributions was first introduced in Norway in 1975. Under the National Insurance Scheme Act, all employers must pay compulsory contributions to the national social security scheme. These contributions are calculated in relation to the gross salaries of employees, with a general contribution rate of 14.1%. By lowering this contribution in line with the perceived severity of the regional problem, the aim is to reduce or prevent depopulation in the least populated areas by stimulating employment and settlement in these regions through the reduction in labour costs (EFTA Surveillance Authority, 2006). Recipients of this aid are all undertakings and institutions (in both the private and public sectors) which are located within the designated eligible areas.

The designation of areas eligible for such operating support is restricted under the regional aid guidelines to what are known as the least-populated areas – NUTS II regions (and adjacent contiguous and smaller areas) with a population density of eight inhabitants per km² or less. More than this, the country concerned must be able to demonstrate that such aid is necessary to reduce or prevent depopulation. The areas designated on this basis in Norway are shown in Figure 2.1. They are centred on the NUTS II region of North Norway (population density 4.1 per km²) as well as on the more remote parts of the NUTS II region of Hedmark and Oppland (the population density of these remote areas is 2.2 per km²). In addition, adjacent areas, part of broader labour market regions not reflected at the NUTS II level, were added so as to integrate local differences that do not normally appear at the NUTS II level. Of note, these adjacent areas were all very remote from key centres, with a periphery index of less than 33.¹³ The periphery index for all of those areas eligible for the full 2007-13 period (Zones 2 to 5 on the map) was just 37.5; this compares with 68.1 for Norway as a whole and 74.7 for those areas not eligible for the concession. Zones 2 to 5 hold just over 815 000 people, 17.7% of the

Figure 2.1. Designated areas for the social security contribution 2007-13



Source: Ministry of Local Government and Regional Development.

national population, and have an overall population density of 3.5, less than half of the prescribed limit.

Key features of the different zones into which Figure 2.1 is divided are set out in Table 2.2. The social security contribution rate is the full 14.1% in the

Table 2.2. Award zones under the social security tax contribution

Zone	Tax rate (%)	Aid intensity (%)	Population 2005	Population share (%)	Population change 95-05 (%)	Population change 00-05 (%)	Population density (per km ²)
1	14.1	0	3 790 982	82.3	8.0	3.8	42.0
2	10.6	3.1	204 075	4.4	-4.3	-2.2	3.3
3	6.4	6.8	96 617	2.1	-4.2	-2.0	2.2
4	5.1	7.9	315 743	6.9	-4.3	-2.1	4.8
4a	7.9	5.4	106 972	2.3	11.3	5.3	27.1
5	0	12.4	91 974	2.0	-5.1	-1.3	1.6

Source: EFTA Surveillance Authority, Decision No. 228/06/COL of 19 July 2006.

non-designated Zone 1 and then declines progressively until no contribution is required in the far north (Zone 5). Over the past decade, Zones 2 to 5 have suffered from broadly the same levels of depopulation (with falls of around 4-5%) and all have very low levels of population density. Zone 5 covers the far north – North-Troms and Finnmark. With just 1.6 inhabitants per km², further depopulation is an obvious threat to service provision and the overall viability of the region. Zone 4 covers the rest of North Norway plus adjacent areas to the south in Sør-Trøndelag and Møre og Romsdal.

While this zone also suffers from depopulation and low population density, the two main regional centres of Tromsø and Bodø (Zone 4a) have experienced significant growth. Nevertheless, they continue to be designated because of their importance as regional service centres and as engines of regional economic development. However, aid intensity is lower than in the rest of Zone 4. Zone 3 covers the outer periphery of southern Norway and mainly consists of mountainous areas. It has fewer than 100 000 inhabitants and no urban centres. Finally, Zone 2 focuses on the remaining peripheral areas in the south. Accessibility is less of a problem but depopulation and low population density are present. No urban growth centres are included within this zone.

At present, the differentiated social security contribution is in place under the 2007-13 regional aid guidelines. Norwegian authorities consider such support to be the most effective and efficient way of stimulating employment in rural and peripheral regions suffering from depopulation.¹⁴ The advantages thus underlined relate to administrative simplicity, direct and substantial impact on employment opportunities and expected real income, with neutral application across sectors. Support, directly linked to the costs of employing persons in these areas of Norway, is automatic and transparent. The decisive factor taken into account is the location of the business unit. The scheme is designed to help limit depopulation of the designated regions in two ways: by reducing labour costs, thus increasing employment opportunities and by increasing the real income of residents. The importance placed on such support is reflected in the reaction to the ESA decision that it would have to be phased out from most areas over 2004-2007 as it did not appear to be compatible with the 2000-06 regional aid guidelines, after a similar scheme in Sweden was called into question by the EU.

First, compensatory measures were introduced for affected areas in the form of *de minimis*¹⁵ aid of up to EUR 100 000 over three years to private sector firms; second, additional regional development funds were made available at the county level, to be managed by county-private sector partnerships (within standard regional aid guidelines and constraints); third, counties and municipalities were compensated for the increased wage costs they faced via the award of additional discretionary support under the General Purpose

Grant Scheme; and, fourth, a special national transport concession was introduced. These compensatory measures were considered to be fiscally neutral, maintaining the same levels of transfer to those areas previously eligible for the contribution.

In addition, looking forward to the 2007-13 period, a strong case was made to the ESA state aid authorities (subsequently agreed) to allow the award of such operating aid aiming to preventing depopulation. The new social security contribution comprises zones very similar to those which applied prior to 2004, except that Zone 4 has been sub-divided while Zone 2 has seen its coverage reduced. The previous contribution was available in areas holding 23% of the national population (in 2003), as compared to 17.7% currently. Although more limited in scope, the new scheme is estimated to involve revenue foregone of NOK 8.5 billion per annum, with some three-fifths of this benefiting the private sector.¹⁶

The Norwegian view is that if the scheme results in lower long-term labour costs, it will favour labour-intensive industry or production methods over capital intensive industries in these areas. In addition, it is considered that the scheme aims to favour new employment creation in the target regions, rather than in other regions. When the objective is employment of people resident in the specified Norwegian regions, labour subsidies are considered to be the most efficient measure. The conclusion of a certain number of Norwegian economists is that capital subsidies increase the use of capital and only indirectly increase the use of labour by greater production volume (Lind and Serck-Hanssen, 1972; Serck-Hanssen, 1984; Hoel and Ove Moene, 1987; Møreforskning Molde, 2001).

This type of support is also found in both Finland and Sweden (see Box 2.3), though only as *de minimis* aid. Research in these countries has not in general been particularly positive about the impact of such schemes on employment (see, for instance, Bohm and Lind, 1993 and Selvitysmies Raimo Sailaksen työryhmä, 2005). Norwegian authorities argue that the Finnish scheme was at the outset presented as an experiment, whereas a reduced social security tax can only have full effect when it is expected to be stable in the long run, so that business operators can rely on it when they choose where to invest and which technology to use. Concerning Norway, the results of empirical studies relating to the transfer of the differentiated rate of social security taxes to labour costs on the longer term varies.¹⁷

Regional aid and the regional aid guidelines

Under the 2007-13 regional aid guidelines, areas can be designated for regional investment aid purposes (see above) only if they meet certain criteria. In Norway, the key criterion was low population density – namely that eligible

Box 2.3. Social security concessions in Sweden and Finland

Sweden has operated regional social security concessions since the beginning of the 1980s. Following the decision not to approve such support for 2000-06, the Swedish government prepared a new act to allow future concessions to be awarded under the EU *de minimis* rule. Concessions were restricted to Aid Area A. The focus was on small businesses and support services in those parts of the country suffering from extreme geographical disadvantage. The maximum concession was EUR 9 500 for each employee per annum. Given the *de minimis* rule, support was most beneficial to small businesses.

Finland introduced, at the beginning of 2003, a waiver on employer social security payments in Northern Lapland and the islands under the *de minimis* rule as a part of a three-year pilot initiative. The report on the pilot (Korkeamäki and Uusitalo, 2005) concluded that employer costs were reduced by approximately 4%, though this had no statistically significant impact on regional employment. On the other hand, salaries increased in Lapland by approximately 2% more than outside the pilot regions. The waiver in the pilot regions was extended until 2009. In addition, a similar initiative was introduced in Kainuu for 2005-09. At the start of 2007, the pilot waiver was made available in Pielisen Karjala and in two municipalities in Eastern Finland.

areas should be NUTS II areas with a population density of less than eight inhabitants per km² or NUTS III areas with a population density of less than 12.5 inhabitants per km².¹⁸ This gave Norway a population ceiling of 29.1% for its designated areas.¹⁹ However, within this ceiling, there was some flexibility under the guidelines to enable parts of adjacent NUTS III areas to be included. An interesting feature in Norway is the extent to which this provision to swap areas was utilised. Only the three counties in the north – Finnmark, Troms and Nordland – and Sogn og Fjordane in the south-west were included in their entirety.

Municipalities in the counties of Hedmark, Oppland, Telemark, Aust-Agder and Nord-Trøndelag, holding just under 10% of the national population (445 006), were swapped out while municipalities in Østfold, Buskerud, Vest-Agder, Rogaland, Hordaland, Møre og Romsdal and Sør-Trøndelag, with just over 8% of the national population (374 739), were swapped in. Such fine-tuning was in response to the variations which exist in the nature and intensity of the regional challenge within certain counties. The concern was to ensure the inclusion of areas facing specific regional problems, in particular certain remote mountainous municipalities as well as island communities

and coastal areas facing accessibility challenges (see Ministry of Local Government and Regional Development, 2006). At the same time, some relatively healthy regional centres, with positive population developments, were omitted. A summary of these adaptations is provided in Table 2.3 below. It confirms that the swapped in areas were very similar to the designated areas as a whole in terms of population density, ongoing depopulation and periphery index value. In contrast, the swapped out areas had above-average population density, were experiencing population growth and were close to the Norwegian average in terms of peripherality.

Table 2.3. **Designated, non-designated, swapped in and out areas**

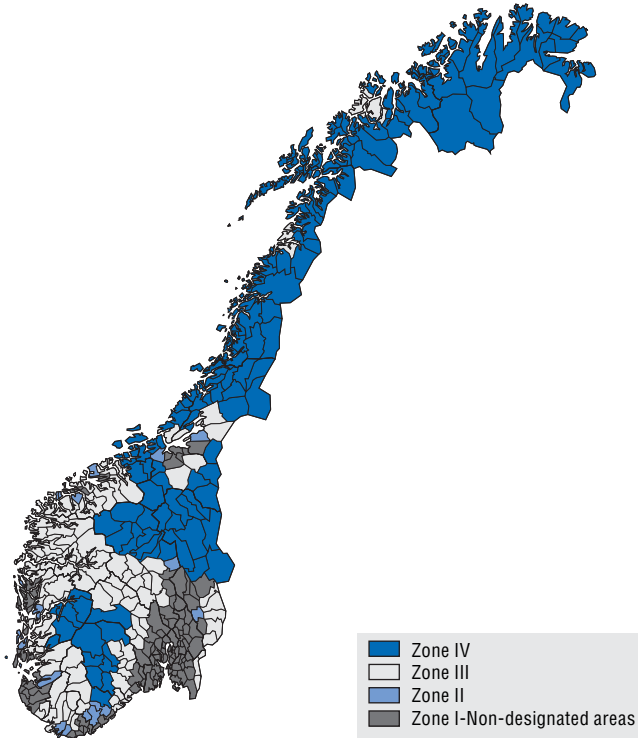
	Population 2005	Population density (per km ²)	Population change 85-05 (%)	Population change 95-05 (%)	Population change 00-05 (%)	Periphery index
Designated areas	1 268 515 (27.5%)	4.5	-2.9	-1.8	-0.8	39.9
Swapped in areas	374 739 (8.1%)	5.8	-4.0	-1.9	-1.1	39.6
Swapped out areas	445 006 (9.7%)	31.3	8.7	4.4	2.2	62.4
Non-designated areas	3 337 848 (72.5%)	77.9	17.6	9.2	4.3	78.9
Norway	4 606 363 (100.0%)	14.2	11.1	5.9	2.9	68.1

Source: Ministry of Local Government and Regional Development.

A map of the designated areas is provided in Figure 2.2. It covers 86% of the land mass, holds 27.5% of the population and differentiates between zones in line with the perceived severity of the regional problem. However, the degree of discrimination is less than under the 2000-06 map which distinguished between five zones (A, B, C, D and E), with no support in Zone E. In contrast, the current zones distinguish between four categories of areas. The proposed maximum rate area, Zone IV, is a combination of the former Zones A and B and also including eight municipalities from Zone C. It covers virtually all of North Norway (but excluding Tromsø and Bodø) as well as sparsely populated areas in the south. Zone III includes Tromsø and Bodø plus 24 newly designated municipalities in the south and west. Zone II is small, equivalent to the previous Zone D (where only advice and development support is available). Finally, Zone I, which lies outside the designated investment aid areas, is constrained geographically; even so, it holds 72.5% of the population (compared with 74.2% for Zone E over the 2000-06 period).

The maximum aid ceilings for Zone IV for the period 2007-13 are 35% for small enterprises, 25% for medium-sized enterprises and 15% for large

Figure 2.2. Designated regional aid areas 2007-13



Source: Ministry of Local Government and Regional Development.

enterprises. The respective maximum aid ceilings for Zone III are 5% points lower. This compares with maximum aid intensities over the 2000-06 period of 30% for SMEs and 25% for large companies in Zone A, 25% and 20% respectively in Zone B, and 20% and 10% respectively in Zone C. In addition, the aid intensity could be increased by a further 5 percentage points where the investment was expected to have a strong regional effect, except in the counties of Hordaland, Rogaland and Vest-Agder where the Zone C ceilings could not be exceeded. Given that the new maximum priority Zone IV is more extensive than Zones A and B combined, the new award ceilings are less generous for most large companies, but at least as generous for most SMEs that innovation policies under the responsibility of Innovation Norway seek to specifically support.

The regional aid package in Norway consists of regional investment grants and risk loans as well as the provision of advice and development support. These latter “softer” measures have been receiving more emphasis in recent years. The objective of regional aid is to contribute to the development

of viable and profitable enterprises in the designated areas. As mentioned earlier, regional aid budgets have been devolved to the county level since 2003. The size of the budget devolved to each county reflects the zoning in the map. Thus, in 2006, over two-fifths of regional aid spending was allocated to the three northern counties. Nordland, with just over 5% of the population, received 18.9% of the regional aid budget; Troms (3.3% of the population) obtained 12.1% of the budget; and Finnmark (1.6% of the population) benefited from 10.4% of the budget. Nord-Trøndelag and Sogn og Fjordane were the other key beneficiaries, receiving 7.6% and 6.4% of the regional aid budget while each having less than 3% of the national population.²⁰ One last point to note is that the new regional aid guidelines allow the introduction of aid to stimulate entrepreneurship, permitting a wide range of support to small undertakings during their start-up phase. Serious consideration is being given to the introduction of such assistance in Norway.

2.2.2. Policy instruments targeted at the North

North Norway is, politically, the part of Norway which receives most emphasis and, in budgetary and expenditure terms, it is the area of maximum priority. This is seen clearly in the regional policy sphere where the counties of Nordland, Troms and Finnmark form a distinct area for many policy purposes. Like all areas in Norway with low population density and outward migration they receive specific attention as compared to other parts of the country but in those cases the highest support rates available apply, whether for the social security tax exemption or for regional investment aid. Besides, North Norway also benefits from tailor-made measures applicable only in that area: the North Norway Grant to enhance the quality of public services, the allocations or tax exemptions within the Action Zone of North Troms and Finnmark and lastly business support provided within the NT programme for the North.

North Norway as a whole benefits from the larger reductions in social security contributions in Zones 4 and 5 (see Figure 2.1). While no social security contributions at all are payable in Zone 5 (North Troms and Finnmark), the contribution rate applicable in the rest of North Norway is just 5.1% in Zone 4 (a grant-equivalent of 7.9%) and 7.9% in Zone 4a, Tromsø and Bodø (a grant-equivalent of 5.4%). In similar vein, all of North Norway, apart from Tromsø and Bodø, falls within the top priority Zone IV of the regional aid map (see Figure 2.2). As just discussed, the three northernmost counties also receive much higher levels of regional aid per head under the devolved regional aid budget while North Troms and Finnmark receive the most generous awards per municipality under the Regional Grant.

In addition, there are a number of specific economic development measures which are available only in North Norway. One is the innovation-oriented NT programme which is discussed in detail in Section 2.3. Another is

the North Norway Grant. This aims to give municipalities and counties in North Norway additional funding to allow them to provide enhanced public services. The rate of award per inhabitant varies according to the matrix presented in the Table 2.4 below, resulting in an overall transfer to North Norway of over NOK 1.5 billion per annum.

Table 2.4. **North Norway Grant in 2007**

	Municipalities (NOK per inhabitant)	Counties (NOK per inhabitant)	Population (2006)	Amount (NOK million)
Nordland	1 398	878	236 257	537.7
Troms	2 682	1 000	153 585	565.5
Finnmark	6 553	1 367	72 937	577.7

Source: Ministry of Local Government and Regional Development.

A third specific component of the regional policy package for the north consists of the Action Zone of North Troms and Finnmark. This was originally established in 1990 and was last reviewed in 2004 when Parliament confirmed the need for ongoing extraordinary measures for the region.²¹ In addition to the zero-rated social security contribution (annual value NOK 1.7 billion), additional measures consist of reduced personal taxes (NOK 0.6 billion per year) and personal benefits: reduction of student loans (up to 10% of the initial loan) with a maximum award of NOK 25 000 per year (annual value NOK 0.1 billion); exemption from tax on household use of electricity (annual value NOK 0.1 billion); higher family and children's allowances (annual award NOK 0.1 billion); and specific benefits for pre-school teachers. The total cost of such measures is estimated to be around NOK 2.6 billion annually. Adding to this annual benefits for the Action Zone under the North Norway grant (estimated at NOK 590 million), the Regional Grant (NOK 145 million), the regional aid package (NOK 125 million), then just under NOK 3.5 billion per annum is involved. Spread over the population of the area (91 974), this amounts to over NOK 37 500 per person per annum, more than four times the spending per head across the designated areas as a whole.

The most significant policy developments in the north over the past few years relate to the High North (see Section 1.4.1). Policy for the High North (the Barents Sea region) has traditionally been sensitive internationally, raising issues relating to security, defence, foreign affairs, natural resources, energy and, of growing significance, the environment. With the end of the Cold War and the development of new opportunities relating to the area's large petroleum and gas reserves (in addition to its healthy fishery resources), the High North has moved to the top of the policy agenda. In March 2006, an important compromise was reached with respect to the development of the

area which balanced environmental, energy and fisheries concerns.²² It identified where extraction could take place but also, importantly, where the focus should instead be on fisheries. In light of these developments, a new optimism has been created in North Norway. Translating this optimism into tangible developments of long-term benefit is an important current focus of Norwegian regional policy.

2.2.3. Policy issues and challenges

In Section 1.4, a number of clear territorial challenges emerged: difficulties created by terrain and climate, problems associated with sparse population and remoteness, related pressures on settlement patterns, the spatial dimension of sectoral developments; and globalisation. Resolving the policy tension between the need for international competitiveness and the desire for equity and stable settlement structures lies at the heart of territorial dilemmas in Norway. In response to such challenges, spatial targeting of policy is complex. There are designated sparsely populated areas for regional investment aid and designated least-populated areas for provision of regional operating aid. There is also significant differentiation within and between these designated areas. The regional problem in Norway is seen very much in terms of low population density, depopulation and peripherality, with implications for settlement patterns and service provision. The nature and acuteness of the problem is at its most severe in the far north but there are important differences between the three northern counties, municipalities and between regional centres and their rural hinterlands. Moreover, the territorial challenge extends beyond North Norway, with remote areas much further south suffering from low population densities and depopulation.

How has policy responded to these challenges? In terms of objectives, recent White Papers have seen stability and consensus around the three key goals of policy: provision of equal living conditions across the country, broad maintenance of settlement patterns and the development of regional strengths. Consensus across the political spectrum concerning tailored measures targeting different zones is such that little perspective has been given to support of local initiative aiming to lift the potential of identified assets. Present policy, more of a compensatory nature, is well developed by adequate funding that generous petroleum reserves provide. Even if the post petroleum era is yet far away, thought could start to be given more on measuring the overall efficiency and effectiveness of these policies. Strategic evaluations, effect analyses, benchmarking and cost-benefit analysis could be more systematically deployed to facilitate adaptation to variations in local circumstances.

Given the above, it is perhaps not surprising that the policy response has been a very broad one. Regional policy in Norway involves a wide range of

components. As discussed, it covers a variety of district policy measures (including in particular the differentiated social security concession) which focus on sparsely populated areas facing permanent disadvantage and hardship. Within this, additional support is provided for North Norway in the form of higher award rates and additional policy instruments, especially in the Action Zone of North Troms and Finnmark where support extends beyond business development to include reduced personal and household taxes. Innovation-oriented assistance is also an important component of Norwegian regional policy, with its stress on growth and competitiveness. While the urban dimension to policy is less visible, it is present within the innovation measures (with their inevitable focus on towns and cities with a critical mass of eligible activities) and is also reflected in more general policy developments. Finally, though not part of regional policy *per se*, the regional impacts of sectoral policies are clearly important in the Norwegian context.

Considering regional policy as a whole, a key feature of the Norwegian approach is that most funding flows to those areas experiencing the most severe problems, as reflected in the two regional aid maps (underpinned as they are by the periphery index). Thus, the benefits of the social security concession are differentiated through the different designated zones to favour in particular the far north and, less so, sparsely populated and remote areas further south. The importance attached to this distribution of funding is underlined by the decision to pay out compensation during the 2004-2006 period, to reflect exactly the losses borne by each area compared to the 2003 position. The North Norway Grant also distinguishes strongly by area in terms of its funding, with much higher per capita flows to Finnmark over Troms and Troms over Nordland. There is also strong territorial differentiation under the Regional Grant though, under this scheme, the main distinctions are between the far north and the rest of the country, on the one hand, and between smaller and larger municipalities on the other. Regional investment aid also has a clear spatial dimension, with far higher per capita regional aid budgets devolved to the three northern counties. Such funding flows are very much grounded in the key objectives of policy of providing equal living conditions across the country and maintaining broad settlement patterns.

The key policy instrument in funding terms is the differentiated social security concession which, at some NOK 8.5 billion per annum, accounts for a major part of narrow regional policy support. This has been a key component of policy for most of the past 30 years and is closely aligned to the objectives of achieving equal living conditions across the country and helping to maintain settlement patterns. It is valued particularly for its ability to address the problems of permanently disadvantaged areas facing depopulation by making sector-neutral support available in an administratively efficient way. However, the reverse side of this coin is that there is no pro-active element

to such support, no choice in how it is spent. This was thrown into prominence by some of the compensatory measures provided when the social security concession was phased out from all but the far north over the 2004-2006 period. On the other hand, there have been concerns about the additionality of some of the compensation provided and about the negative effects of territorial competition for resources in a situation where the distribution of funding is not automatic. With a heavy reliance on public sector resources and jobs, such competition is particularly strong in North Norway, both between counties and between municipalities within counties.

The other main form of automatic support is that channelled through the municipalities via the Regional Grant and the North Norway Grant. Together, these total over NOK 2 billion per annum. For the North Norway Grant, allocations are driven primarily by population and location (with by far the highest per capita support in Finnmark) while, for the Regional Grant, they reflect location (with the Action Zone for North Troms and Finnmark being favoured) and size of municipality (with maximum support for municipalities of less than 3 000 inhabitants). Viewed in tandem, such municipality support is clearly in line with the policy goals of providing equal living conditions across the country and supporting settlement patterns in those parts of the country where they are weakest. The fact that, outside of North Troms and Finnmark, the level of the Regional Grant is driven by size of municipality rather than by designated area location underscores the priority attached to supporting small rural municipalities.

Set against such automatic support to sparsely populated areas, discretionary business aid in the form of grants and loans is at a much smaller scale. The package of regional aid, combined with innovation support, amounts to less than NOK 1.5 billion per annum. An important feature of the available aid is that the maximum rate areas are now much more extensive than was the case in 2000-06, including sparsely populated areas in the south. This was a response to a view in Norway that insufficient use was being made of the support possibilities compared to the EU. On the other hand, a strong EU trend has been for business aid to become more selective, with maximum awards made only to projects which demonstrate the need for such support. While the wish to have the *ability* to award the maximum possible under the regional aid guidelines is understandable, it is equally important that aid recipients should have to demonstrate the need for aid case per case.

The breadth of the available regional policy support in Norway, combined with the desire that policy should reflect the different needs of different regions, creates considerable co-ordination challenges. These exist at the national level with respect to the different regional priorities of sectoral ministries; between the national and regional levels; and also at the regional (county) level. The establishment of the government sub-committee on

district and regional policy at the end of 2005 has been a positive development that certainly contributed to the sectoral component of the 2006 White Paper preparing regional reform. However, it remains problematic, in Norway as elsewhere, to try to ensure that sectoral budgets take account of regional concerns. Differing priorities of sectoral ministries suggest that national-level co-ordination will continue to be challenging. An interesting approach to overcome this challenge is that of Finland (OECD, 2005e) where 10 key sector ministries must define since 2004 regional development plans concerning their field of responsibility. These plans fit into the Regional Development Act guidelines defined by law in 2002 and the nine regional development targets adopted by government in January 2004.

Policy co-ordination between the national and county levels is also an issue. Such co-ordination is complicated by the major decentralisation of budgets and responsibilities to the counties in 2003, almost with “no strings attached”. While other countries are also keen to give the regional level as much responsibility as possible, they tend to stress that national funding is involved and that there is thus a responsibility on the regional level to take national goals and priorities into account. This philosophy has recently been strengthened in the EU with the introduction of National Strategic Reference Frameworks which provide a context within which regional development programmes and plans can be set and judged. While it remains to be seen how effective the new EU system will be, it stands in some contrast to the current Norwegian approach. On the other hand, the upcoming reform of the regional/county level of government seems likely to provide an opportunity for this aspect of policy to be reviewed. Considered from an international perspective, there is certainly an argument for the introduction of more co-ordination between national objectives and regional priorities in Norway.

Finally, at the county level, a key issue concerns how policy is developed and implemented. Although there are regional development plans, and although these are meant to be based on county-led regional partnerships, the evidence is that they have been variable in terms of content and strategic vision and that they do not always reflect a genuine partnership ethos. If the goal of policy is indeed to differentiate between the different needs of different areas, then an agreed holistic vision of the regional challenge seems essential. This suggests that more attention will have to be paid in the future to partnership-based strategy development and implementation. This has been part of the regional reform process in Denmark and seems likely also to be reflected in future developments in Norway. One of the arguments for larger and more powerful regions is that they would be better placed to develop and implement holistic regional strategies. In circumstances where there is strong competition for public resources at the regional and municipal

levels, it is important for there to be an agreed strategic vision into which all concerned parties can buy.

2.2.4. Summing up

Foundations and vision of regional policy

The goals of Norwegian regional and district policy are relatively stable over time, reflecting a broadly based policy consensus aiming to provide equal living conditions across the country, maintain settlement patterns and to focus on and develop regional strengths. Because of their mutual impact, can competitiveness and equity concerns be better brought together, allowing synergies between the two to develop in a proactive fashion? Likewise, could stronger co-ordination more effectively take into account the regional dimension of sectoral policies? Likewise, in an integrated approach, the continued emphasis on settlement patterns, combined with the increasing importance of growth and competitiveness objectives suggests that the role of urban areas in regional economic development could be more explicitly recognised.

Cost efficiency concerns

Given the varied nature and intensity of regional challenges in Norway very significant funding will continue to flow towards designated regions via various automatic support mechanisms. Without challenging the volume of funding flowing to beneficiary areas, can support to major urban centres experiencing population growth build more explicitly on development aims for the wider region? How could the automatic character of many aid mechanisms leave room for more local initiative that would enhance the impact of such transfers? Can incentives be provided for projects on the basis of various criteria such as involvement of different sectors through partnerships or intermunicipal co-operation, creating a more competitive environment for the definition of sustainable projects? Likewise, systematic measurement of results and cost efficiency could introduce objective rules for further funding, meaning that the most value-added projects would continue to receive appropriate support while the least successful could be phased out on the basis of valid indicators.

Regional reform

Over the last few years counties have been receiving more leeway to develop their regional development strategies and forthcoming regional reform (see next chapter) will increase their powers. Will this opportunity be seized to bring closer together sector concerns and regional development aims, thus providing a holistic vision for regions within which added value

will appear? This entails requirements for effective vertical co-ordination, as policy delivery will be based on sharing of responsibilities between different levels of government. Increased horizontal co-ordination at the national level would also be required to oversee the smooth functioning of a new framework based on renewed principles of regional autonomy. Could the government Sub-committee on Rural and Regional Policy created in 2005 be further strengthened to this end?

2.3. Regional competitiveness policies

2.3.1. Innovation and cluster policies

Evolution of policies

Innovation and cluster policies have evolved in Norway over the years. A report to the government in 1981 laid the foundation of major elements of Norwegian technology and innovation policies during the 1980s (Hauknes, et al., 2003). These were based on strategic technology areas with a technology-push orientation but focus on the determinants and drivers for regional and local economic development was already at the time a policy concern. Small and medium-sized enterprises have also always been a prime target of innovation policies through STI (State Technology Institute), transformed into a private foundation with the objective to promote knowledge on technology and management for SMEs, renamed TI (Technology Institute) in 1988.¹¹ Emphasis on North Norway has been part of this policy picture from the beginning: the Service Office for industry for North Norway had similar functions to TI, with attention to the special needs of the northern parts of the country.

In 1993, the *Research Council of Norway (RCN)* was given a strengthened and formalised agenda that went beyond the role of a classical research council. Besides being a research council in the established sense, the new organisation was given the explicit task of being a central policy formulating and advisory body for national R&D and innovation policies. The 1990s also saw the establishment of the Norwegian Industrial and Regional Development Fund (SND). Like RCN, SND was established as a re-organisation and re-orientation of several pre-existing institutions, including the Regional Development Fund, the SME Fund and the Industrial Fund. SND's main task was to stimulate industrial development, by contributing to the development, modernisation and readjustment of Norwegian industry in general, and by promoting initiatives which would secure lasting and profitable regional employment.

Towards the end of the 1990s, interest in innovation and R&D policies stepped up. The Research Council became the institutional stronghold for innovation theories and was supported by the research department at the

Ministry of Education and by the research department of the Ministry of Industry and Trade. In 1999, the Research Council succeeded in creating an alliance with the Norwegian Industrial and Regional Development Fund (SND) and the Norwegian Export Council to promote the idea that Norway needed a new industrial strategy and that this strategy should be based on innovation. A White Paper on the Norwegian Industrial and Regional Development Fund (SND) was published at the beginning of the new millennium. It pointed to new challenges in the use of knowledge, research and innovation with the objective of developing framework conditions for viable industrial development in all parts of the country.

In order to achieve this, the White Paper argued that regional resources must be mobilised and connected to relevant competence institutions such as universities and technical schools and their networks. In parallel, the Ministry of Trade and Industry initiated an evaluation of the structure of business-oriented policy instruments and institutions. A proposal, based on the Ministry of Trade and Industry's investigation, was presented to Parliament at the beginning of 2003. It recommended uniting the most important institutions targeting innovation and entrepreneurship, with a new organisation – Innovation Norway – being established. The new body was created in 2004 by bringing together the Norwegian Government Consultative Office for Inventors (SVO), the Norwegian Trade Council and the Norwegian Industrial and Regional Development Fund, as well as the National Tourism Board.

Successive governments have regularly stressed the importance of innovation for maintaining living standards in a high cost economy mostly based on natural resources such as Norway. Innovation systems theory and clusters concepts such as developed by Porter are central to policy thinking. This has led to the establishment of several programmes and instruments to encourage networking and the distribution of knowledge and competence in various parts of the innovation system. This is assorted by an increased effort on R&D: the target is to raise total R&D spending to 3% of GDP by 2010, with public financing of R&D at 1% (the 2004 figures were 1.6% and 0.74% respectively, rising to 2.1% and 1% respectively if expressed as a percentage of mainland GDP; OECD, 2007a, p. 119). Innovation and cluster policies and programmes are to a large extent based on the triple helix model. The programmes can be divided in two categories:

- Core activity programmes focusing on developing clusters on the long term and in a holistic way. The foremost examples of this approach are the Arena and Centre of Expertise Programmes.
- Support programmes which focus on specific problems, needs and/or challenges within a cluster and/or between the firms in the cluster and outside actors, such as the Value creation 2010 programme.

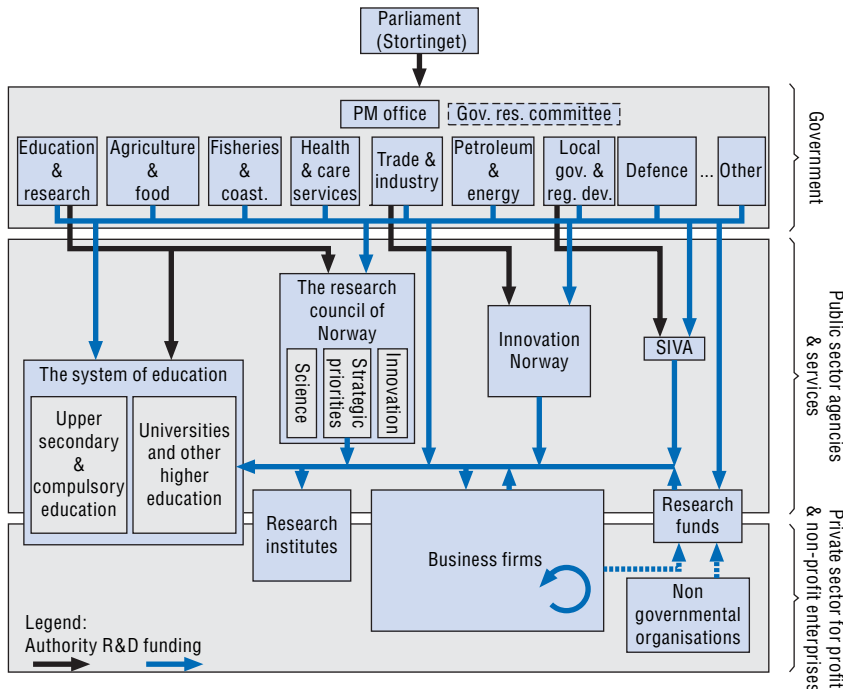
Policy framework

Major ministries

The policy framework for innovation in Norway, in which major actors from education and R&D participate, brings together many institutions: major ministries, public agencies, and the private sector. The complexity of the system appears in the chart below (Figure 2.3). It shows in particular that not less than eight ministries participate in the innovation process, which covers many different fields. Three ministries however have a central role in the development of national innovation policies:

- The Ministry of Trade and Industry, which is responsible for innovation and cluster policies in the broad sense.
- The Ministry of Education and Research, which is responsible for overall R&D policies.
- The Ministry of Local Government and Regional Development, responsible for innovation policies at the regional level.

Figure 2.3. **The Norwegian System for Education and R&D**



Source: Research Council of Norway (2006), *Report on Science and Technology Indicators for Norway 2005*, Research Council of Norway, Oslo.

Policy co-ordination was ensured until the end of 2005 through two high level ministerial boards, one devoted to innovation issues and the other to research but these formal mechanisms seem to have been since discontinued. There are several parliamentary committees examining innovation and cluster issues, in particular the Standing Committee on Education, Research and Church Affairs, the Standing Committee on Business and Industry and the Standing Committee on Energy and the Environment.

Major agencies and other actors

Following reorganisation and rationalisation in the previous and current decades, there are now three major public policy institutions in Norway that help fund or encourage innovation activity in Norway: The Research Council of Norway (RCN); Innovation Norway and SIVA (Industrial Development Corporation of Norway). The different reforms aimed to give each institution clear and distinct mandates, with mutual co-operation ensuring a wide array of organised support to business development. Innovation Norway has a strong co-ordinating role with large variety of programmes and networks, while RCN focuses on research and SIVA on creating and maintaining the infrastructure required for innovation.

Innovation Norway (IN), organised as a state-owned company is the central body contributing to innovation promotion in Norway, employing more than 700 people. IN maintains offices in all counties and in more than 30 countries world wide. Funded basically by the Ministry of Local Government and Regional Development and the Ministry of Trade and Industry, but with important contributions from the Ministry of Agriculture and Food and the Ministry of Fisheries and Coastal Affairs, it is mandated to achieve national and regional goals in accordance with innovation policy. Total operating revenue in 2005 was NOK 704 million (Innovation Norway, 2006), of which NOK 501 million were allocated through the state budget and NOK 203 million was provided by external revenue, primarily from sales of services connected with marketing and internationalisation. National policy aims are followed through programmes like the Norwegian Centres of Expertise based on competitive funding and regional policy goals are pursued in co-ordination with regional councils receiving annual allocations for regional development.

More broadly, the stated vision of Innovation Norway – Giving local ideas global opportunities – is developed on the basis of a wide array of policy measures ranging from grants and risk capital, to business-oriented consulting and competence development, regional and national network services as well as internationalisation and profiling support. Innovation Norway thus backs and promotes in particular established and newly founded SMEs. The organisation provides or arranges financing and links enterprises to know-how, engaging in

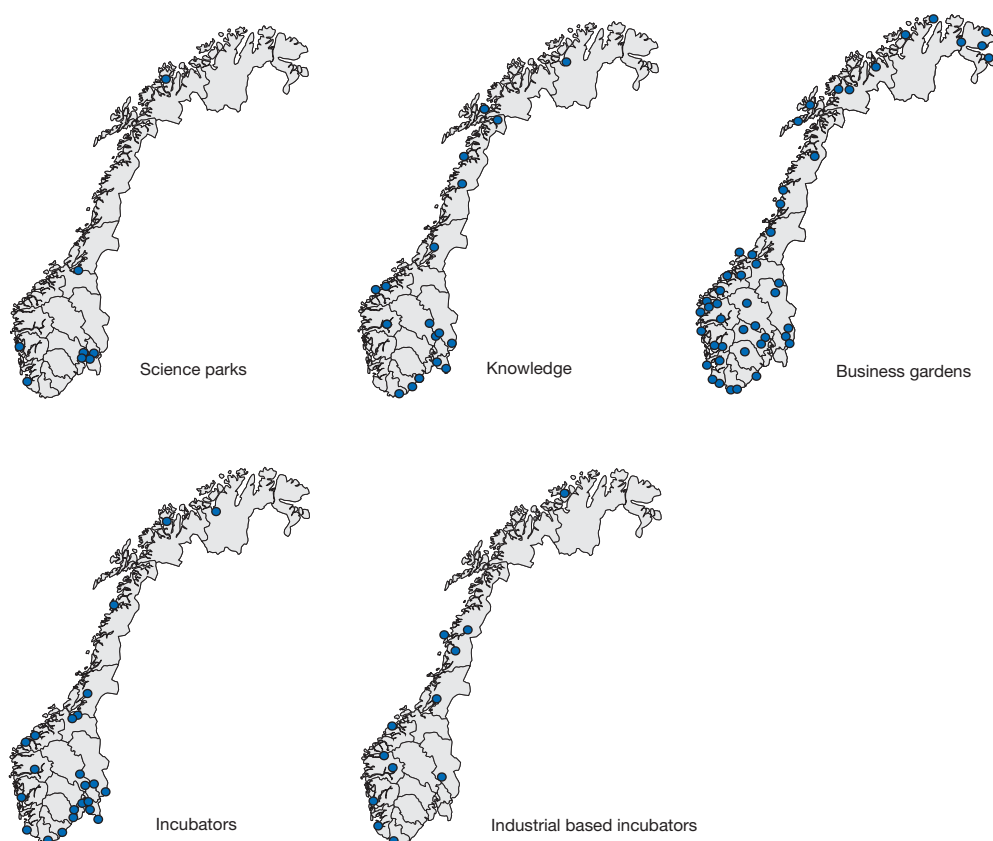
activities that range from simple business advice to financial schemes and hi-tech innovation. IN is a key central and county/municipal player in innovation in Norway playing a leading co-ordinating role in this area (see below).

The Research Council of Norway (RCN)²³ was formed by the 1993 merger of five different bodies; it is under the responsibility of the Ministry of Education and Research. Of its 2006 budget of NOK 5.2 billion (about EUR 650 million, or 0.25% of GDP), 20% was provided by the Ministry of Trade and Industry for industrial R&D projects, and 24% by the Ministry of Education and Research. The Ministry of Education and Research also allocates nearly EUR 200 million as return on the “research fund”, making the Ministry RCN’s largest contributor. The remainder comes from contributions of other ministries. RCN advises the government on research policy and is an important source of finance for publicly funded fundamental and applied research. It is a meeting place for researchers in the public and private sectors and co-operates in international research. It distributes as grants nearly 30% of public funds for R&D, after evaluation of projects. Among the instruments for supporting industrial R&D and innovation, the general and project-based innovation arena (user-driven innovation arena, or BIA) and related schemes are central.

RCN also helps to finance three types of innovation-oriented institutes. The newly created “Centres for Research-based Innovation” (SFI) aim at encouraging private sector R&D efforts via closer relationships between major research groups and R&D-intensive enterprises. “Norwegian Centres of Excellence” (SFF), of which 13 have been selected, are already-existing research groups, chiefly in universities, supported with the goal of underwriting high-quality long-term fundamental research. Lastly, RCN contributes to the financing of “Norwegian Centres of Expertise” (NCEs), together with SIVA and Innovation Norway. On the longer run, RCN will be focusing on financing long-term programmes (of approximately EUR 125 million each, annually over a 5-10 year lifespan) in the areas of petroleum resource management, clean energy, nanotechnology, aquaculture, climate change, ICTs and genomic research.

The Industrial Development Corporation of Norway (SIVA) is a public corporation founded in 1968. SIVA aims to develop strong regional and local industrial clusters through ownership in innovation infrastructure, investment and promotion of knowledge networks. SIVA’s main objective is to support overall regional policy goals in terms of business development and knowledge dissemination, meaning that it is present in all the country, including remote areas. With an annual turnover of around EUR 30 million, SIVA has stakes in 150 companies and it is a co-owner of around 60 science and research parks and other innovation centres (see Figure 2.4). It advises on, and helps finance, the creation of networks between regional, national and international R&D units. It also helps to create industry incubators and supports the establishment of

Figure 2.4. Innovation players in Norway

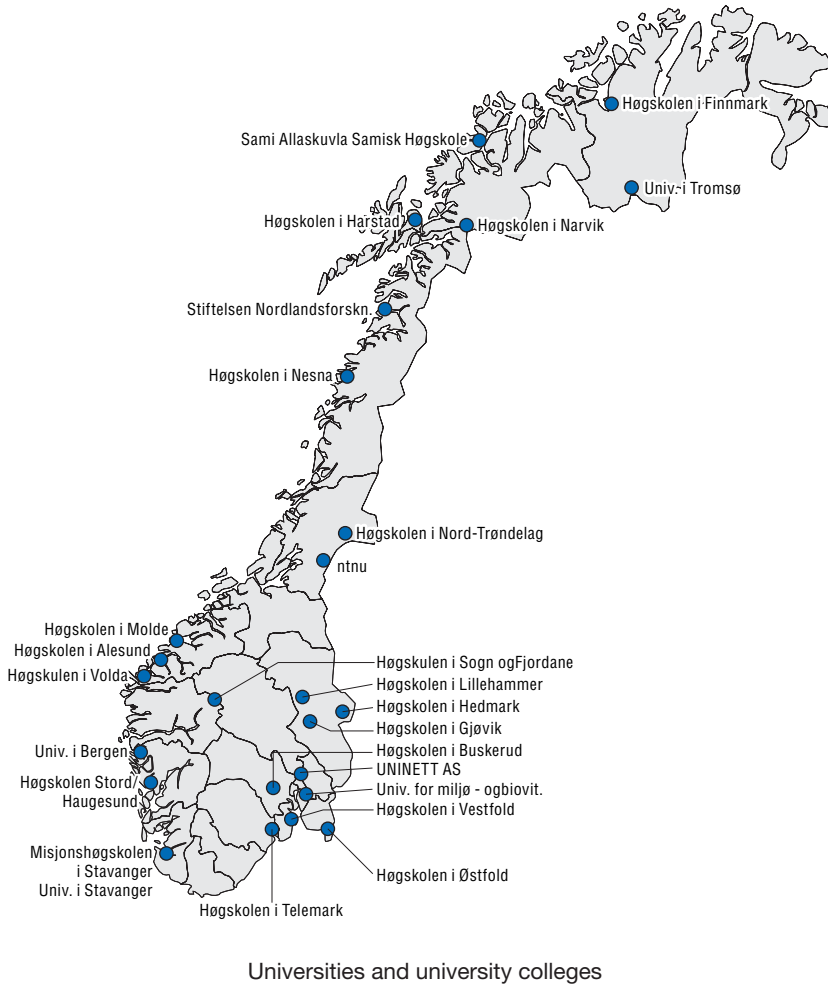


Source: www.siva.no.

new firms within these, often on the basis of start-up grants from Innovation Norway.

SIVA is the central player financing this infrastructure in which local government is usually the major stakeholder, jointly with other institutions (universities and technical institutes) and the private sector. SIVA's programmes covers business incubation (18 incubators in operation in 2006), business gardens (44), knowledge parks (SIVA, co-owner of all 15), and industrial and business parks (44 co-owned and operated by SIVA). This impressive network coverage brings forward a few major questions: are there enough financial and human resources in certain mostly rural areas to fully exploit the potential of this infrastructure and attain critical mass? Even if these institutions are under the same umbrella, is there sufficient co-ordination

Figure 2.4. **Innovation players in Norway (cont.)**



Source: www.siva.no.

and co-operation between them? An evaluation of SIVA conducted in 2000 (Wiig Aslesen, et al., 2000) recognised the value of SIVA but underlined the danger of spreading its engagement to too many initiatives and brought forward the requirement of better developing innovation in traditional sectors. It remains to be seen which steps have been taken in these directions so as to improve the efficiency of this infrastructure in terms of promoting regional innovation, particularly in district areas.

Universities and university colleges

Before the Second World War, Norway had only one university, in Oslo. After the war, three new universities were established: in Bergen, in Trondheim (Norwegian University of Science and Technology, NTNU) and in Tromsø (Ministry of Education and Research, 2003). In the latter case, the aim was to develop North Norway so the decision clearly had regional development as its main objective. The following specialised university Institutions can also be mentioned: the Agricultural University of Norway (Ås), the Norwegian School of Economics and Business Administration (Bergen), the Norwegian School of Veterinary Science (Oslo), and the Oslo School of Architecture.

A Royal Commission appointed in 1965 paved the way for the establishment of new higher education institutions in the regions, facilitating access outside big cities and introducing new types of study programmes. Together with upgraded colleges of teacher training, engineering and nursing, these form the basis of today's state university colleges. A good number of these university offer programmes in general and pre-school teacher training, nursing and social work, frequently also decentralised or at distance (tele-education), to cater for adult students in the regions. Moreover, in 2004, the Norway Open University was established to stimulate the use of ICT, lifelong and flexible learning in Norwegian higher education.

Today, universities and university colleges are well spread over the whole territory of Norway, as the map above indicates, serving the whole country in education and innovation promotion. The contribution of these institutions to innovation is supported by various policy measures facilitating R&D links with the private sector so as to support transfer of ideas to market. One of the policy tools devised for this purpose is the “Mobilisation for R&D-related innovation” programme (MOBI), analysed further on. The HEI and R&D system as a whole is of course well anchored today in areas such as maritime/fishing or petroleum/gas expertise, the long-term challenge being to open up to other areas, in tune with the future evolution of the economy, in the post-hydro carbon period.

Governance of innovation and co-ordination

The Ministry of Trade and Industry ensures an overall co-ordination role in innovation policy, as indicated above. It collaborates with different ministries in working groups to guarantee cross-sectoral co-ordination. In spite of this, co-ordination does not translate into simplification of procedures for the financing of Innovation Norway that is the major player in these fields in the country. It's funding flows from many different sources, meaning as many different instructions on how to use the resources. However, the three

main agencies dealing with innovation (Innovation Norway, RCN and SIVA) do have a collaborative working agreement covering the period 2005-2007 (RCN, 2005). During this first period the signees have mostly engaged in close common dialogue with their beneficiaries, both public and private. They also strive to jointly provide practical information to firms through a common Internet portal (www.innovasjonstjenester.no). At the regional level lack of systematic co-ordination is also noticeable. Many regions still lack a truly comprehensive innovation strategy and in many cases the relatively modest role of innovation in regional development or city planning reflects this. The forthcoming White Paper on innovation will provide an opportunity to review these issues.

These different tasks with strong impact on policy delivery can be facilitated when an overarching body helps the government to define long term strategies and promote inter departmental co operation. Such is the case of Finland, where matters pertaining to research and innovation are scrutinised by a high level council in which major ministries and the scientific community are represented. The Finnish Science and Technology Policy Council, chaired by the Prime Minister, guarantees smooth co ordination within innovation related policies and activities. It comprises representatives of the Ministry of Education and Science, the Ministry of Trade and Industry, the Ministry of Finance in particular. It includes ten other members designated by the Academy of Finland, the National Technology Agency of Finland, universities and industry as well as employers' and employees' organisations.

Financing of innovation in Norway

The main source for innovation funding in the state budget is the Ministry of Trade and Industry (MTI). In the budget for the year 2007, MTI received an allocation of NOK 5 425 million (Norwegian state budget 2007, at www.regjeringen.no) of which NOK 1 107.6 million was channelled to Innovation Norway with an object clause of promoting innovative activity, and another NOK 31 million was channelled to SIVA with the same objective. The budget from the MTI to the Research Council of Norway was NOK 1 081 million in 2007. The Ministry of Research and Education is the second biggest financial contributor in terms of innovation spending, but it appears quite complicated to extract these allocations from the overall budget of the Ministry (NOK 87 360 million for the year 2007). Higher education, including universities, received NOK 20 921 million while the research budget in total is NOK 13 454 million. In 2007, the Ministry of Local Government and Regional Development allocates NOK 147 million to Innovation Norway. In addition, Innovation Norway administrates a substantial part of the Ministry's allocation of NOK 1 207 million to the 19 counties for the implementation of regional development strategies. Other ministries such as Transportation, Agriculture and Fisheries allocate funds to Innovation Norway as well.

Apart from public funding for different programmes through the main public agencies, innovation financing relates to risk capital in its different forms. Private players account for most of the risk capital on offer. The public seed capital scheme consists of several nationwide, regional and rural funds, supplying early phase projects with funding and professional advice. All are based on the same principles: Innovation Norway contributes with subordinated loan capital and write-off funds. Nationwide Seed Capital Funds, co-ordinated by Innovation Norway, provide NOK 667 million of governmental capital divided between the four major university cities. These nationwide seed funds are to mobilise private capital and advisory services to projects in the start-up phase and strengthen the commercialisation of research. There are also public Regional Seed Capital Funds set up in different regions along the same principles.

In 2006, specific seed capital funds were set up by Innovation Norway in areas of North Norway, to stimulate implementation of new business ideas. These rural seed capital funds target Nord-Trøndelag (Namsos), Nordland (Bodø) and Troms (Tromsø). These funds aim to increase the supply of seed capital and enhance economic development in areas where private financing is difficult. These funds are financed with 70% subordinated loan capital (NIBOR +0.5%) from Innovation Norway and 30% private equity capital. Twenty-five per cent of the loan is put aside in a loss fund. There is support to cover administrative costs during a life span of 15 years. The share of state loans is somewhat higher and interest on the loan somewhat lower as compared to nationwide funds. As these funds have only been created recently, it is too early to provide an assessment of their impact.

Another source of innovation funding is the Skattefunn tax credit scheme introduced in 2002. SMEs can deduct from payable tax 20% of their expenses on internal R&D projects not exceeding NOK 4 million each, or NOK 8 million if the R&D project involves collaboration with an approved R&D institution. Large enterprises can deduct 18% of equivalent R&D expenditures from payable tax. RCN must approve the project as falling within the definition of an R&D activity. Qualifying projects must generate new knowledge, information or experience that is useful for the enterprise in development of new products, services or processes. There are no regional or sectoral constraints. Enterprises that have insufficient, taxable income to use the full credit receive the remaining amount as a cash refund (74% of total tax expenditure was distributed in this way in 2005). Skattefunn is neutral between qualifying projects, regions and sectors or the tax position of qualifying firms. However, it benefits R&D in small enterprises or low R&D spenders more than in larger ones due to the ceilings. It has proved highly popular since its inception. The 2005 tax expenditure of Skattefunn was NOK 1.2 billion, about 0.06% of GDP.

Policy tools and programmes

Norwegian policy tools seeking to promote innovation and regional development are primarily based on a branch neutral support strategy. One key reason is the difficulty in picking winners among industrial branches; another is the flow of labour and capital resources between branches. This main picture must be slightly adjusted because the Research Council of Norway has several branch targeted programs in prioritised areas like the marine sector, the maritime sector and the petroleum sector in particular. This is also true for Innovation Norway's value creation programmes in primary industries. Another key feature of the various instruments, schemes and programmes is that they are often "demand driven", that is to say based on the initiatives of the entrepreneurs applying for support. On the other hand, the three national development agencies work intensively to stimulate entrepreneurs and enterprises, networks and industrial milieus to be potentially qualified for the schemes and programs.

Norwegian innovation policies and schemes are, to a large extent, based on a systemic view of innovation processes. An important part is the idea of strengthening the ability of companies to absorb technologies and know-how. This is an integral part of several schemes as identified by the STEP-group in 2003. As of today, there are several programmes which aim to promote innovation, clustering and co-operation between players (firms, R&D-institutions, development agencies, authorities). These programmes are mainly managed by the national developmental agencies (RCN, Innovation Norway and SIVA). Many of the programmes are co-financed by two or more ministries. Over the years, the national development agencies have developed a great number of schemes and programs, thus blurring somewhat the policy messages. Both RCN and Innovation Norway, recognising that some amount of simplification would be useful, are in a process of reorganising and reducing the number of schemes and programmes.

Norway also strongly emphasises clusters in its innovation policy, with a growing number of projects in this field that is developing world wide: during the year 2003 there were more than 500 cluster initiatives in different countries (Sölvell, Lindqvist and Ketels, 2003). The trend is recognition of the inherent advantages of clusters. The most common goals in these initiatives are networking that facilitates the sharing of ideas and promotion of innovation. Norwegian policy tools, building up on existing clusters (see Chapter 1), seek to enhance their performance while facilitating the creation of new groupings. In Canada, this kind of approach puts focus on regional development and on bringing different programmes together within a major cluster project (see Box 2.4).

Box 2.4. Regional Strategic Initiative (RSI), Bas Saint Laurent Region, Quebec, Canada

In the Bas-Saint-Laurent region of Quebec, Canada Economic Development (CED) is building on an approach that draws on broad consensus among the various local stakeholders and networking among teaching and research establishments and enterprises. Activities carried out under the Regional Strategic Initiative (RSI), launched in 1998, have been instrumental in creating a marine cluster. Centered on three types of activity (development and creation of SMEs, development of scientific expertise and development of a network to facilitate scientific transfer), this strategy has helped to provide the region with a nationally and internationally competitive research and technology transfer infrastructure. The creation of the *Technopole Maritime du Québec (TMQ)*, an organisation devoted to the promotion of innovation, community facilitation and networking among marine institutions and enterprises, in 1999, was an important first step in promoting networking among partners in the community. National programmes that foster research and development (National Research Council of Canada and Canada Foundation for Innovation), those promoting regional competitiveness and economic diversification and a sound regional partnership allowed more than CAD 70 million of investment (public and private) to develop infrastructures supporting the marine industry which totals 3 600 jobs in the region.

The development of a critical mass of enterprises to position the industry on the national and international scene is still a sizeable challenge for an outlying region. To accomplish this, the Bas-Saint-Laurent regional action plan focuses on segments of the industry with strong development potential from a national and international standpoint and for which the region already has recognised expertise. Two sectors are targeted in particular: the marine biotechnology sector, including promising applications in the pharmaceutical, nutraceutical, cosmetic and environmental fields, and marine technology linked to electronic navigation equipment and marine information. As in the past few years, preference is given to a joint approach by various regional players and the promotion of strategic, growth-generating projects. These projects include the St Lawrence Global Observatory (SLGO), intended to improve access to data and information related to the St Lawrence ecosystem, and the Marine Security Centre, intended to improve the safety of the transportation network and Canada's maritime borders.

Source: Canada Economic Development, 2007.

As indicated above, the policy tools fostering innovation, clusters and regional development in Norway are numerous. Some are nationwide schemes that have no direct intended regional effects, others are deliberately focused on regional development in targeted areas, often of a rural character and experiencing economic downturn linked to out-migration. Some policy tools deliberately target hi-tech development in core sectors, while others aim to enhance knowledge dissemination in competitive environments or simply in counties by networking of knowledge institutions and firms in certain sectors. The policy picture is very diverse and efforts are being made to streamline the wide array of measures that sometimes overlap. It would be near impossible to present all measures and, in any case, the territorial development dimension of many is quite indirect. On the basis of these considerations, two categories of selected major policy measures only are presented hereafter:

- Nationwide schemes to promote regional innovation.
- Schemes and programmes targeting mostly rural areas and districts.

Nationwide schemes to promote regional innovation

“Mobilisation for R&D-related innovation” (MOBI) is a collaborative programme to create innovation clusters. It is an “umbrella” programme, implemented by the Research Council of Norway, with a total budget of NOK 38 million in 2005 and NOK 47.5 million in 2006. The main objective is to promote learning, innovation and value creation in companies with only minor R&D experience, which is the case for most SMEs. The programme puts a strong emphasis on regional innovation processes. MOBI comprises three sub-programmes: The Industry-College Collaboration Scheme (ICC), Research-based competence brokering and Arena.

The main objective of the *Industry-college Collaboration Scheme* is to create better linkages between universities/university colleges and industry in the regions. The scheme aims to strengthen the ties and mutual exchange of competence between SMEs and the public university colleges and to stimulate the regional capacity of innovation in both colleges and the industry. The main concept behind the scheme of *Research-based competence brokering* is that research communities may serve enterprises locally and regionally by working proactively with those that have little R&D experience and help to identify needs, analyze problems and suggest possible solutions by co-operation with research organisations.

Østerdalsskolen, a training programme carried out in co-operation between manufacturing companies and Hedmark University College (Department of Business Administration, Social Sciences and Computer Science), in the region of Østerdalen in Eastern Norway (Odden, 2006), is a

good example of this policy. The main objective of the project was to contribute to innovation and value creation in the participating companies. The main themes of the programme are: Health and safety, work environment, communication, productivity and innovation. Front managers in the companies were the main target group. According to the evaluation, the participants raised their consciousness and increased their understanding of the main themes of the programme, with some examples of behavioural change on the job. The programme also increased contact and collaboration between the companies that indicated their willingness to enter into another phase of work.

Arena, Innovation in Networks, is a national programme supporting regional cluster processes. The objective is to increase innovation and value creation in regional clusters and business communities by strengthening linkages and collaboration between industry, knowledge providers and the public sector. The programme targets regional clusters based on a concentration of firms and relevant R&D and knowledge institutions within a business sector, where there is a potential for strengthening the interaction between these parties. The programme offers financial and knowledge support to the planning and implementation of long-term development projects. The projects being supported, numbering around 20 today across the country, are based on regional initiatives and partnerships between the leading players of the cluster.

The Arena programme is a joint undertaking between Innovation Norway, the Research Council of Norway, and SIVA, with Innovation Norway acting as operator. Regional projects supported by Arena are incorporated into the regional development plans, so the county authorities are important co-operative partners. Arena has annually at its disposal approximately NOK 32-35 million. The main strategic goals pursued by Arena are the following:

- To establish networks that can facilitate development of relationships between the actors.
- To initiate network-based innovation projects and processes.
- To develop and implement competence activities to strengthen innovation capabilities.
- To develop and implement educational options and R&D activities better adapted to the needs of the business communities.
- To develop a more proactive and well co-ordinated involvement from the public sector.

The projects are based on regional initiatives and partnerships between the leading players of the cluster. The goals, strategies and implementation plans for the projects must also be customised to meet the specific challenges

and resource base of the cluster. The projects are organised with a steering group representing the partnership between the relevant groups and organisations and are carried out by a project team led by a project manager (cluster facilitator). Arena offers funding of the basic activities in the cluster projects. This largely includes costs of project management, workshops and networking, communication activities and a limited amount of consultancy services. The more concrete innovation projects originating from these basic activities are then funded through ordinary private and public funds.

An interesting example of efficient networking through Arena is offered by the Blue Light pilot project started in 2001 which is now evolving into a permanent venture between the partners. Blue Light is an information security project built on collaboration between firms in the field of information security, multimedia and e-learning. The project is co-ordinated by Gjøvik Business Park (Oppland county) in south-central Norway. Blue Light has resulted in the creation of several companies with different product launches in the field of information security. National scale development and co-operation are now being prepared. Other examples of activities organised under the aegis of Arena are provided further in the section related to innovation in North Norway.

The *Norwegian Centres of Expertise programme (NCE)* aims to initiate and enhance co-operative innovation and internationalisation processes in clusters with goals and potential for growth. The programme was jointly initiated at the beginning of this decade by Innovation Norway, SIVA and the Research Council of Norway, which are also supervising implementation. The goal of the programme is to strengthen the international competitiveness of regional industrial environments by developing their core competencies. The programme targets well established clusters with a high degree of innovation and with at least some firms already on the international market. NCE provides financial support for process management, network-building, idea and project development, internationalisation and communication, as well as professional support to internal learning activities, international dialogue and specialised seminars. The programme has a 10-year timeframe with 3.5-year contracts. The programme budget in 2006 was NOK 35 million and NOK 50 million in 2007.

NCE started with a pilot project in 2004 with a Maritime cluster located in Møre og Romsdal county, on Norway's south-west coast. The maritime cluster, consisting of 170 companies and 13 000 workers, is related to offshore activities, focusing specially on firms in boat design, ship equipment, ship-building, education, research and finance. The cluster focused efforts on increasing and enhancing co-operation between these different players. Another pilot project, to test the possible working of NCE, was started in 2003 in the Raufoss Technology Park (Oppland) presented in Section 1.4.3 above,

with a network of 50 cutting edge companies working mostly as suppliers for the automobile industry. The cluster focus is on material's technology (light metals, plastics and composite materials) and automated production.

In the first call for proposals of the new programme, in 2006, six NCE projects were selected (Table 2.5), including Møre og Romsdal and Raufoss. Four more National Centres of Expertise projects are to be selected through 2008. Amongst contenders for the first round, there was a project concerning Oslo and its region where cluster-based approaches are being developed by the main private sector firms (see further) within Oslo Teknopol. This project was however not awarded funding, definitely showing that project selection is not biased towards the capital city region, which is seeking to build up its international status. A new submission is planned for the next round of funding.

Table 2.5. **Norwegian Centres of Expertise selected projects 2006**

Sector	Location
Maritime	Møre og Romsdal (Møre)
Microsystems	Vestfold (Horten)
Systems engineering	Buskerud (Kongsberg)
Subsea	Hordaland
Light weight materials	Oppland (Raufoss)
Instrumentation	Trøndelag (Trondheim)

Source: Innovation Norway, 2006.

Value creation 2010 (VS 2010) is an applied research programme based on a partnership between the Confederation of Norwegian Business and Industry, The Norwegian Confederation of Trade Unions, Innovation Norway and RCN. The programme was initiated in 2001 and will run until 2010. The main objective of this programme is to encourage organisational development and innovation, both within individual enterprises and in learning networks between enterprises, based on new forms of co-operation between the industrial and social partners and other players in the value creation process. This is pursued by active participation of researchers themselves as development partners. The programme in particular supports development of regional innovation strategies within regional partnerships. VS 2010 had a total budget of NOK 25.5 million in 2005, and 24.3 million in 2006.

The outcomes of VS 2010 projects for companies²⁴ are considered as broadly positive (Arnold, et al., 2005). There is wide agreement that projects have a positive influence on profits and a smaller one on employment. The programme has produced a considerable body of knowledge as well as a mechanism. Nonetheless, according to the evaluation, it does not transform

enough of the learning from the projects into tools that can be transferred to users, other researchers and professional “vectors” of development knowledge such as business development advisors and consultants. This means that the programme’s spill-overs could be more developed. Also, the programme, tackling “soft” or non-technical innovation faces a cultural challenge: namely, to extend the idea of innovation from “technical innovation” to a more holistic one.

VRI, “*Policy instruments for regional R&D and innovation*” is a new programme including both MOBI and VS 2010 whereby RCN restructures and develops its regional policy instruments in a more decentralised fashion. It aims to promote regional innovation by strengthening R&D resources in the regions. The first programme period is 2007-2016, consisting of regional VRI programmes where regions will have freedom in prioritising the focus and the directions of use of funds. The first Call for proposals was opened in February 2007. The programme budget for the period 2007-2009 is NOK 302 million. The programme will seek to bring together regional and national strategies. The primary goal for VRI is to encourage innovation, knowledge development, and added value through regional co-operation and a strengthened research and development effort within the regions. VRI will focus both on company driven innovation activities as well as on strategic university projects and funding for competence building activities will also be allocated.

Schemes and programmes targeting mostly rural areas

Rural district development (BU-midler) is a scheme administered by Innovation Norway aimed at commercially oriented projects in connection with agriculture, especially agro-tourism. Prioritised areas of intervention are restructuring of activity, business and process development, ICT integration in business. A supplemental rural district scheme, administered by the county level provides financial support for the development of sustainable workplaces in agriculture and related activities. Rural district development resources (BU resources) can also be applied for in view of construction of farm buildings, in addition to financing with interest-bearing loans from private banks or Innovation Norway. Other programmes such as Value Creation target the primary sector, providing financing, consultancy and networking. Target groups are food producers: farmers, foodstuffs businesses and industry, logistics/sales, foodstuffs retailing, catering, restaurants and tourism. In the area of forestry, various subsidies were provided up to 2005. The objective was the increased use and higher conversion of timber. Lastly, the Marine innovation programme provides the same type of services as those mentioned above for other sectors. The goal is here the implementation of innovative

projects and value chain networking in order to strengthen added value and increase profit for businesses in the sector.

FRAM is a programme managed by Innovation Norway aimed at management and strategy development to improve competitiveness and long-term profitability of SMEs, including farm enterprises. The programme in particular gives many rural SMEs and farmers access to new management methods and efficient use of ICTs in business operations. During the programme period 1993-2002, an average of 53% of the participant companies were located within defined targeted district areas. This proportion has increased in recent years and reached 73% in 2003. Local marketing, recruiting and monitoring of participant companies, along with project definition and funding, are tasks that are accomplished by Innovation Norway's district offices in liaison with county councils, through county project managers in participating in the programme.

High risk loans can also be applied for by firms in rural districts. Such risk loans are used to finance projects where initial risks are high, with Innovation Norway intervening to evaluate the risk and provide advice. IN will look into project feasibility and the possibility of achieving profitability in the future. The risk loan service is valid throughout the whole country and can be given to small, medium-sized and large businesses, whether new or long-established businesses. The risk loans can cover most projects that are concerned with company establishment, new product development, reorganisation or expansion. The introduction of new technology and the implementation of research and development results are areas that can be financed with risk loans. Innovation Norway's risk loan cannot however be used to finance ongoing operational expenditure. In designated rural districts, the service can additionally cover investment in buildings, machines and operational equipment if such expenditure aims to increase efficiency, growth and co-operation.

A certain number of nationally designed business and knowledge infrastructure schemes managed by SIVA presented above actually benefit a large share of rural areas. 10 out of the 18 business incubators spread across the country were situated in 2006 in "assisted" (district) areas, which are essentially rural, even if they comprise urban hubs of various sizes. Likewise, industry incubators (on the basis of a new programme launched in 2004) are in majority situated in such areas (four out of seven in 2006). These contribute to spin-offs and the development of local sub-suppliers. The greatest part of Business gardens (knowledge-based groupings of SMEs in small communities) is also located in district policy areas: 35 out of 44 in 2006. Lastly, industrial and business parks are usually situated in district policy areas. This appears to be a rather specific feature of Norwegian innovation policy which is, alongside

the other programmes mentioned above, systematically geared towards innovation in very different environments.

2.3.2. Regional competitiveness and major urban centres

Urban growth challenges in Norway

Urban growth issues in Norway are set in a very particular context. The country is the second least urbanised one in the Nordic area, behind Finland (see Chapter 1). The capital city municipality has a population of more than 540 000 inhabitants, which is over twice as much as the second city municipality, Bergen. Only five municipalities have a population exceeding 100 000 inhabitants: besides Oslo and Bergen, this is the case of Trondheim, Stavanger and Bærum, which is part of the built up area of the Oslo conurbation. All of the major cities are located in the southern part of the country, the biggest city in the North, Tromsø, has a population of 64 000 inhabitants only. The Oslo Metropolitan area, depending on the definitions retained (see Section 1.1.2 above) comprises a population between 1.1 million inhabitants to around 1.6 million in 2006 in a country of close to 4.6 million inhabitants. All these major urban areas are growing, contributing to the national economy but also attracting people from sparsely populated rural areas and from the periphery.

The implications of this specific situation are numerous, particularly in terms of innovation. The first one is that Norway, contrary to most other countries, has never really had an urban policy *per se*, but rather that sub-elements of urban policies were found in other policies such as innovation where the urban dimension readily comes to mind. Urban policy was long defined as the policy ensuring balanced growth and social cohesion within a city and its area, meaning first of all measures to ensure integration in neighbourhoods where immigrant workers live and work, such as those taken in Berlin (see OECD, 2003c), amongst others. Nowadays, urban policy has also taken up another meaning in terms of policies aiming to promote broad city competitiveness, with a strong emphasis on innovation and cluster policies. Such is the case of policies developed, if one refers only to other Nordic countries, in Helsinki, Copenhagen and Stockholm (see OECD, 2003c; OECD, 2003a; OECD, 2003b; and OECD, 2006a).

Norway, up to now, has not developed such approaches. Integration of immigrants has not been a crucial issue as in other countries, because of a wider spread of these new inhabitants over the territory and well targeted policies aiming to facilitate the process (see Section 1.1). Likewise, natural growth of urban areas in the south does not seem to have justified policies fostering urban competitiveness, occurring largely on the basis of private sector intervention or as a result of specialisation induced by exploitation of

natural resources and a learning environment supported by renowned university institutions having further spurred the development of the local economy. Then why bring such issues forward today? First, integration of immigrants is becoming a policy concern, at least in certain parts of cities, particularly Oslo, where immigrants tend to concentrate because of lower rents. Second, the long-term competitiveness of the Norwegian economy, past the petroleum era, will depend on innovative capacity that concentrates largely in major urban areas and is investigated below.

Greater Oslo region

Introduction

The Oslo region concentrates between 20% to one quarter of the population in Norway depending on the definition of the metropolitan area retained and is enjoying a demographic growth rate of 1.12% per year over the past decade in its labour region (see Section 1.1.2). It regroups an impressive array of learning and research institutions, with 22 university and college institutions, 65 000 students and 75 R&D centres, including the biggest Norwegian Higher Education Institution, the University of Norway, which has an enrolment of 30 000 students. The Oslo metropolitan region also constitutes the only urban area of “European size” (Bundt, 2003), able to compete in the global economy with other capitals in the Baltic Sea region and it is fast growing, particularly since 2001 (+1.15% per year for the Oslo City region between 1996 and 2006).

This growth is not without bringing up a series of strategic issues that the forthcoming White Paper on the Oslo region will be investigating, with consequences on future regional reform. These issues are examined here in terms of impact on the attractiveness of the metropolitan area considered as an essential component of competitiveness. The design and implementation of globally oriented innovation strategies vying to comfort the position of the capital city area in the international arena rest on the prerequisite that the Oslo region continues to remain an attractive working and living place for creative professionals both from Norway and abroad. This is the case today but a certain number of recent developments could somewhat modify the picture.

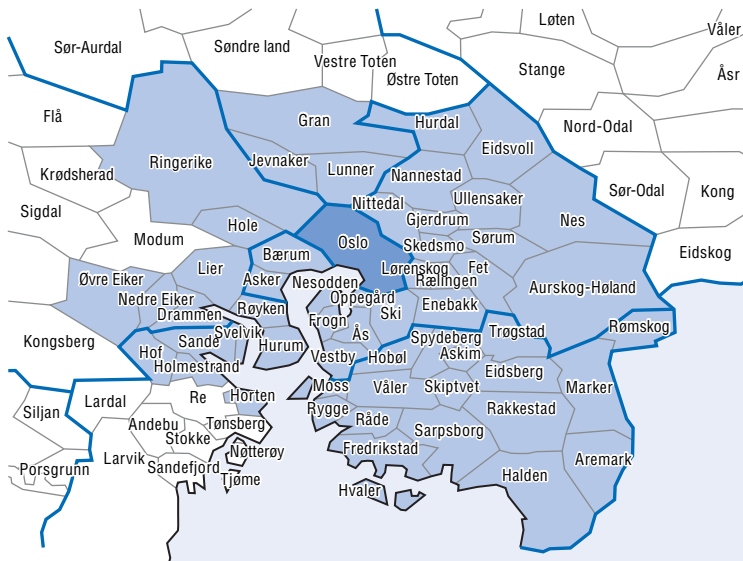
Immigration is one of these issues, with increasing concentration of foreign population in certain neighbourhoods, entailing new requirements in terms of infrastructure, renovation of housing and public services. Urban congestion is another, with increasing delays to access the workplace at peak hours. Important initiatives have been taken by Oslo county and city authorities, jointly with surrounding municipalities regrouped within the Oslo Alliance²⁵ (see Figure 2.5) to tackle these problems, on the basis of a long-term

“capital city project” strategy. The proclaimed strategic goal of the Alliance is to “strengthen the Oslo region as a competitive and sustainable region of Europe”. Within this vision are the following four strategic areas:

- General development plans, transport and communication.
- Strengthening of competence and added-value.
- Strengthening the branding of the region.
- Developing co-operation to develop social infrastructure.

Governance issues are also at the fore as the Oslo Alliance is for the time being a loose grouping that only deals with the issues that its members decide to discuss. Future regional reform could bring about a more integrated region with formal powers but the geographical boundaries are subject to possible modification. In particular, if the Oslo Alliance acts today as a facilitator in terms of innovation issues discussed with the private sector within the cluster initiative (see below), it is largely devoid of the organisation and the funding to give a substantial thrust to its development, today ensured by major firms. The question of future national level involvement in these areas remains open, on the basis of possible future efforts to develop the capital city’s competitiveness in the Baltic region by better exploiting its assets and surmounting its identified weaknesses (see below).

Figure 2.5. **Oslo region**



Source: Oslo Region Alliance.

Oslo region competitiveness

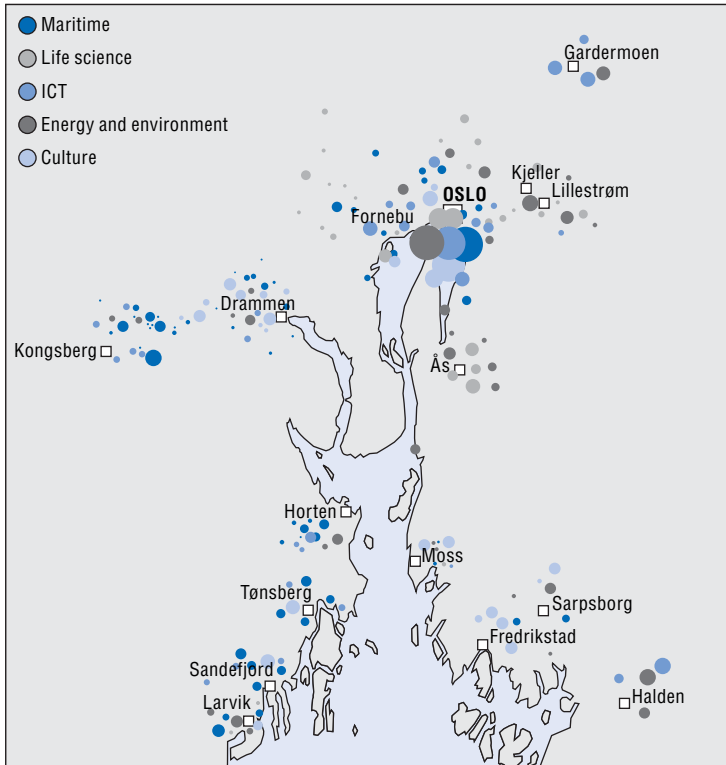
Oslo and its greater urban area constitute a major knowledge centre in the Baltic region, alongside Stockholm, Helsinki and Copenhagen. This position is reflected in the concentration of R&D and presence of numerous world academic institutions. Almost half of all R&D man-years and expenses in Norway are centred in the Oslo region (Oslo Teknopol, 2003). The private sector accounts for around half of this, with public research institutions, the university and university college making up most of the rest. Altogether there are 65 000 university and college students in the Oslo region, hosting 22 universities and colleges. The University of Oslo, one of the largest in Northern Europe (more than 32 000 students) has four Nobel Prize Laureates to its credit. There are 75 private and public R&D institutions, three science parks and numerous R&D-based companies in the area. 43% of those with higher education in Norway live in the Oslo region.

The greater Oslo region's business community consists of 90 000 companies, and the region lays claim to expertise within biotechnology, medicine and health, information and communication technology, and the energy and maritime sectors (Figure 2.6). More than one third of Norwegian growth companies are based in the Oslo region, which gives it the highest density of growth companies in Scandinavia (Oslo Teknopol, 2003). Oslo is also home to a strong financial community and is a preferred location for head offices and international companies. Cluster work, exclusively private sector driven at this stage, is based on intense networking and covers a wide area in and around Oslo. Some of these major clusters are presented below.

- ICTs

The plan to develop a national ICT, knowledge and innovation centre at Fornebu (10 minutes by car from downtown) was implemented in 1998, following the relocation of Oslo International Airport to Gardermoen. The facilities comprise a "knowledge village" and all the major ICT players in Norway are now located there. Telenor, the former historical operator, has brought around 7 000 employees to its new headquarters at Fornebu. Other key organisations are the Norwegian Computing Centre (Central Bureau of Statistics) and SINTEF, the largest applied consultancy company in science and technology in Scandinavia, with 500 employees in Oslo (Oslo Innovation Centre, 2006). SINTEF is a key actor behind the establishment of the Norwegian Micro-technology Centre, which is part of a national micro-technology programme and centres. Amongst other companies and research centres contributing to the development of Fornebu is the Simula Research Laboratory, concentrating on software engineering, communication technology and scientific computing.

Figure 2.6. Greater Oslo business clusters



Source: Oslo Teknopol.

● Biology

The Biological Research cluster situated in Aas, 30 km south of Oslo is centred on the Agricultural University of Norway. Biotechnology in relation to food science and food health is the major research area, developed by the Norwegian Food Research Institute (MATFORSK). Fish genomics and fish health is another focus field. The Institute for Aquaculture Research (AKVAFORSK) offers major competence in genetics, breeding, molecular biology and genome research. The Norwegian Crop Institute (PLANTEFORSK), the Norwegian Centre for Soil and Environmental Research (JORDFORSK) and the Norwegian Forest Research Institute (SKOGFORSK) are other central institutions at Aas, all collaborating closely with the Agricultural University. Furthermore, Aas BioScience Park has been established to generate commercially viable research-based results and knowledge-based project concepts and develop them into profitable business activities. It manages an incubator for this purpose.

- Energy

In the fields of energy and the environment, three institutions in the Oslo area underline specific expertise in highly specialised fields. The Norwegian Seismic Array has proven its great importance to petroleum-related activities on the Norwegian continental shelf and elsewhere in the world, through its research in seismic activity. The Norwegian Institute for Air Research provides national and international expertise in the fields of pollution and air research. The Institute for Energy Technology (IFE) is a powerhouse in a broad range of conventional and renewable energy forms, especially hydrogen research and solar technology. For more than 20 years IFE has been conducting research on the usage and storage of hydrogen. On this basis, plans for the post petroleum era are beginning to emerge with the “Hydrogen Road of Norway” that will link Stavanger to Oslo (560 km) within a few years with a continuous chain of liquid hydrogen filling stations. This project, conducted with research institutions located in other major Norwegian cities, aims to be the first of its kind in Europe, if not the world.

- Oslo competitiveness challenges

As indicated above, Oslo offers contrasting features in terms of competitiveness (see Table 2.6), with both outstanding assets in terms of a capital city of a country offering sound macroeconomic features, with an attractive environment and a good concentration of knowledge-based activities and a relatively young population. On the other hand, living costs are high,²⁶ and white collar salaries are not always sufficiently in proportion while congestion and transportation problems still remain. On the longer run, national level involvement in Oslo region issues that has been rather limited up to now will increase, on the basis of two apparently contradicting goals: the need to maintain balanced territorial development across Norway and the requirements of the global economy, with increasing competitive pressures from other Nordic capitals.

Table 2.6. **SWOT analysis of Oslo region**

Strengths and opportunities	Main weaknesses and threats
Sound macroeconomic conditions	Peripheral position in Europe, Stockholm, Helsinki, Copenhagen, dynamic centres in Baltic
An attractive environment	Low level of R&D in private sector
A high level of skills, a knowledge-based economy	High living costs, but comparatively low wages for highly skilled people
High innovation potential, clusters	Congestion, transportation
Population growth, young population, white collar immigration	Lack of effective metropolitan area co-operation: Greater Oslo region (Oslo Alliance) issues. “The most expensive city in the world”

Source: Oslo Teknopol, 2005, Capital City project, final report.

Lack of urban policy in Norway and hence, lack of targeted support for innovation in the capital city area can be explained by regional development priorities and recognition that Oslo metropolitan area development was occurring anyhow, if only by attracting new skills from other parts of Norway and also from abroad. It seems difficult to consider that these trends could continue without some delicate impacts on other parts of the country while not necessarily sufficiently comforting the competitive position of Oslo, at the service of the whole national economy. Oslo, and also other major cities are attracting talent from other parts of the country where an “internal brain drain” is somewhat occurring, whereas, in the face of competition with other capitals in the Baltic area, Oslo is not fully exploiting its potential (see below). Rather than just “letting things happen” in the capital city area, as was justified and mostly the case up to now, it would seem advisable to recognise fully the challenges arising from these conflicting trends. Developing innovation in the Oslo area can well be done while fostering innovation in other parts of the country if networking approaches are systematically pursued so that HEIs link up nationally on common projects and with the private sector across the country. Urban policy needs to be anchored in regional policy so that the impact of urban measures is fully integrated into regional policy concerns. Likewise, this would promote better understanding of measures required to support Oslo in the international arena in the wider national interest.

Challenges for Oslo in face of international competition are many. First of all, the slightly peripheral position of Oslo in the Baltic area puts it at a small disadvantage as compared to Stockholm, Copenhagen and Helsinki. In addition, the Finnish and Swedish capitals were ranked the top two innovation leaders out of 148 selected European regions (European Commission, 2006). Another handicap is the absence of national global hi-tech companies such as those existing both in Finland and Sweden that warrant continued research and attract international expertise. High cost of living in the capital city region can be another obstacle but rather high salaries in certain positions and quality of life can compensate for this, at least in part. To overcome these handicaps, while better leveraging its assets, Oslo definitely needs to adopt a vision for its future by adequately uniting strengths in the metropolitan area. Future regional reform and the above mentioned White Paper provide a unique opportunity to translate these considerations into policy measures conciliating regional development and international competitiveness perspectives.

Other major cities

There are also cities outside the Metropolitan area with a central role as knowledge centres. Besides, these cities are acting as knowledge centres and resource nodes in their respective regions and they have also a wider national

and international role in their field of expertise. Some of these cities even have strengths that make them compete with Oslo, for example in the field of the oil and gas industries. The challenge is, as developed above, to co-ordinate the network of centres of expertise and economic excellence, by promoting measures and incentives towards increased co-operation between the major city actors and with their northern nemesis, Tromsø.

Bergen

Hordaland county, of which Bergen is the capital, produces 80% of Norwegian raw oil exports (40% from the region of Bergen itself; City of Bergen, 2006). The second city in Norway is experiencing strong demographic growth: it registered the strongest population growth in Norway over the last five years (more than 1.20%) as demonstrated in Section 1.1.2. It possesses a complete cluster of suppliers to the major oil and gas companies, both Norwegian and foreign and has great expertise in the value chain of gas and petroleum, from consultancy and research to new production methods. Bergen also has a long history as a major harbour in Norway, with a commercial tradition dating back to the Hanseatic League in the Middle Ages, of which Bergen was a part. The port of Bergen is the third largest in Europe as for loaded volume and is dominant in the global market of transporting chemicals and other liquids. Also, the Bergen shipping fleet, with 346 vessels and 4.6 million gross tonnage is still today the largest in Scandinavia (Statistics Norway, 2006).

Bergen is also an international fish and seafood trade centre in Northern Europe, handling more than one million tons of seafood every year (City of Bergen). Norway's largest deep-sea fishing fleet and a great number of fish farms are located in the city's surroundings. Bergen is the Northern European centre for research within the field of marine science, with a number of world class institutes. The Norwegian Institute of Fisheries and Aquaculture Research is located in Bergen. In addition to the city's traditional leadership role in the marine sector, this big diversity of international level research expertise within the Bergen area, defines it as the only region in Norway with a complete maritime business environment.

There is a strong research environment and a high-tech industrial sector, both conducting international research. The University of Bergen (including Haukeland University Hospital) has an enrolment of 30 000 students. It boasts three centres of excellence: the Centre for Integrated Petroleum Research, Bjerknes Centre for Climate Research (BCCR) and the Centre for Medieval Studies. The Norwegian School of Economics and Business Administration is located there. Bergen University College also plays a major role: its focus areas are technology and the environment (underwater technology), welfare, as well as art and culture.

Trondheim

Trondheim is famous in Norway both as a historical city²⁷ and as home to the Norwegian University of Science and Technology (NTNU). NTNU is Norway's second largest university with more than 20 000 students and Sør-Trøndelag University College, with 8 000 students, is the third largest university college in Norway. The SINTEF Group, the largest independent research organisation in Scandinavia, has 2 000 employees and two-thirds of these are located in Trondheim. It undertakes research and development assignments in technology, natural science and the social sciences. Key focus areas in Trondheim are design, advanced engineering, innovative measuring techniques, complex analysis and control systems, industrial processing and materials engineering and new safety and environmental standards. Trondheim is also a centre for maritime, technical and medical technology research.

Companies are focused on the offshore oil and gas industry, exploration and sub-sea development and in operations in the North Sea. Trondheim is a major centre of expertise, with its companies linked to the Statoil control centre and service operators in Kristiansund. The city hosts major contractors working on off shore facilities, as well as research and engineering teams supporting the Snøhvit LNG development in the Barents Sea. Floating production vessels also operate out of Trondheim. The prospects of Trondheim are also strengthened by upgrading of mature industries and in particular the infusion of new production technologies and the introduction of new products and service enhancements. The metal industry collaborates with NTNU and SINTEF and in Verdal, Aker Verdal has been able to upgrade itself and to build new activities around it in an industrial village. The experience of the Oi cluster (food) initiative at HIST (the most important university college) may well provide a blueprint for initiatives that might nurture the renovation of many traditional sectors of the industry and public service (OECD/IMHE, 2006).

In Trondheim and its region, NTNU and SINTEF have been the sources of endogenous creation of new industry. NTNU has established a Technology Transfer Office operating since 2004. In a national perspective, the Trondheim community leads the way when it comes to new start-ups. A concrete goal was adopted to have 30 new firms based on knowledge established every year. Regional incubators such as the innovation centre in Gloschaugen also contribute to ease start up of new companies and bring entrepreneurs in touch with funding agents and industrial environments. Relocation to the city of the development units of international companies such as General Electric, Yahoo and Google has also strongly reinforced the ICT research cluster. In this dynamic environment, the city area population has been fast increasing, over the last five years in particular (see Section 1.1.2).

Stavanger

Stavanger, fourth city in Norway, is also the city with the strongest demographic growth rates (measured in labour region terms) in the country over the last ten years as has been demonstrated above. It has a central role in the petrochemical industry and food production in the country. The city has developed over the past 30 years into Norway's oil capital. A number of major companies in this industry are located in the region, as well as the Norwegian Petroleum Directorate. Offshore Northern Seas (ONS), which is one of the world's largest exhibitions and conferences for the petroleum industry, is held in Stavanger every other year. The petro-maritime industries and the food industry are areas in which substantial stakes exist in Stavanger.

The University of Stavanger is Norway's fifth biggest university (8 000 students). It is closely connected to the region's central businesses and research. A collaboration agreement relating to petroleum operations in the far north has been concluded by the University of Stavanger with the University of Tromsø (UiT), and two research institutes (the International Research Institute of Stavanger and Tromsø's Norut research group). The collaboration is aimed to respond to the fact that one-quarter of the world's remaining hydrocarbons are located in Arctic regions by devising new technological solutions to exploit these resources, when exploration must be pursued in deep waters and special climate conditions, within a sensitive environment warranting specific protection.

Kristiansand

The population of the city of Kristiansand has been growing at an annual rate of more than 1% over the last ten years (see Section 1.1.2). It has expertise in offshore oil and gas technology, but it has also boasts one of Norway's IT and telecommunications clusters, based on Agder University College. Access to vast hydro-electrical resources in south-west Norway helped in the establishment of process industries in Kristiansand. The city is also a popular tourism destination in the summer for Norwegians and an increasing number of foreigners. The tourism industry is growing and is a key economic driver in the area.

The city of Kristiansand plays an important role in growth and innovation in the Agder region. Acknowledging this regional role, Kristiansand joined forces with its neighbouring municipalities (Lillesand, Birkenes, Vennesla, Søgne, Songdalen and Iveland) with the purpose of drawing up common goals and strategies on a number of important issues including business and economic development. This territorial co-operation is formalised through a grouping of local municipalities called Knutepunkt Sørlandet ("Knot point Sørlandet"). This group of municipalities works together for the benefit of

business and economic development in their region and beyond. It is a rather unique example in Norway and could be pondered as a method by other cities to support economic development by a shared strategy.

Tromsø

Although Tromsø is smaller than the other cities mentioned above it plays an important role in the development of North Norway (Nordland, Troms and Finnmark counties) as it boasts the only university in the area. It has been registering regular population growth over the past ten years, close to 1.20% yearly, in a position close to that of Stavanger, the number one city in Norway from this point of view. Its role is examined in detail further in this section, in developments relating to North Norway.

2.3.3. Rural/remote area competitiveness

Many peripheral areas of the Nordic countries played an important role in the industrialisation process, especially after the Second World War, when economic growth was based on abundant natural resources, cheap energy and a good labour supply (Virkkala and Niemi, 2006). In Finland and in Sweden, in particular, this situation gave rise to industrial giants in the pulp and paper industry and the metals industry. Although these industries continue to be important, the sources of economic growth have changed. Significant structural changes have taken place with the transformation of the Nordic economy in a knowledge-based direction. Public policies, especially science, technology and industrial policies, played a crucial role in this transformation process. The change to a knowledge based economy and towards a broadly defined innovation policy seems to be regionally and sectorally somewhat biased, that is to say it is focused more towards larger cities and universities than towards rural areas and small towns. This is definitively an important policy issue when thinking of ways and means to introduce innovation as a tool for fostering economic development in these outlying areas.

A substantial part of industrial and economic activity is located outside the larger towns and far away from major cities and capital regions. As global competition sets challenges that increase over time, especially in rural and remote areas that cannot access as easily as others global professional networks, can proactive attitudes towards innovation be relevant in these areas? Is it possible to consider innovation as a solution when the main issue is economic survival, often through large support from the national level, by a large share of public sector jobs in particular? Can innovation participate in these processes, to make them more efficient and enhance competitiveness of small local firms? Since out-migration of working-age people also decreases the number of individuals in a given area that would be more open to

innovation related activities, is the human resource base for innovation sufficient? The only answer to these major questions is a move away from narrow, R&D and technology oriented innovation definitions to a broader one taking into account all possible assets and strengths. Examples within Norway and from other countries presented below show that this is achievable and present valuable experiences in policy terms.

Leveraging local assets in lagging regions and/or peripheral regions

In many parts of Norway, natural amenities or natural resources are often the only choice for economic development, meaning that innovative approaches need to be applied to traditional sectors. In many cases, natural strengths and the corresponding local knowledge base have not been systematically identified and exploited. This process requires support from local government and knowledge institutions in a partnership type approach that can lay the foundation for involvement of the national level through different innovation programmes. The example of the BioInn cluster in Hedmark around the town of Hamar, grouping more than 20 SMEs (see Section 1.4.2), illustrates such an approach. This rural area has been able to develop a globally competitive genetic biotechnology cluster, linked to agriculture and fish farming, exploiting both local and national know-how by linkages with other R&D institutions and participation in national innovation programmes.

When exploiting local assets, regional centres play a crucial role as contributors of know-how and other resources which are not easily available in lagging regions. Public players assume here the role of an initiator/catalyst to develop new activities in their area. This is the approach followed by the Finnish Centre of Expertise Programme, which aims to collect resources and top-level expertise to boost regional competitiveness. Within the framework of the programme there are examples of activities showing that expertise can be developed and exploited in rather peripheral regions, when the focus is on actual strengths of the region. In Finnish Lapland's case the central strength is in tourism. Local players, with the help of universities and R&D institutions, are integrating innovation into tourism products and promotion, by practically developing the concept of an "experience industry" (see Box 2.5). This is also a cross sectoral approach, with the tourism industry working seamlessly together with IT firms and public services.

Innovation policies at a small scale

When looking at the ingredients of innovation processes, the importance of various horizontal networking relationships cannot be underestimated. "Firm to firm" relations are very important and in some cases industry associations play a key role in different ways. Interactions with clients and suppliers

Box 2.5. Finnish Centre of Expertise Programme

The Tourism Experience Industry

The Centre of Expertise Programme plays an important role in a national growth strategy based on information and expertise. It is designed to pool local, regional and national resources to exploit top-level expertise. The programme supports regional strengths and specialisation and furthers co-operation between Centres of Expertise across the country. There are a total of 22 such centres in Finland, and they represent 45 different fields, ranging from biotechnology to cultural content production. The centres launch co-operation projects between the research sector, educational institutions, and businesses and industry. These projects boost competitiveness, strengthen and improve regional expertise, create new businesses and promote the creation of innovation environments.

The expertise developed in Lapland, from the centre created in Rovaniemi, the regional capital, is based on new forms of tourism, providing the visitor with an integrated experience comprising insights into local history, culture, traditions and way of life. The Centre of Expertise seeks to strengthen experiential elements in services and to promote new business activities where the experience is an essential factor of content and success. Product development projects launched within the cluster concentrate on producing new kinds of experience products through co-operation between different sectors: tourism providers themselves, new media, and the entertainment and design industries.

The Lapland Centre of Expertise for the Experience Industry, LEO, acts as a co-ordinator between these different sectors, helping to create the experience concept, promoting co-operation between experience producers, monitoring and analysing results. It also conceives related tourism development strategies and their promotion, in particular their dissemination within the local tourism industry. It has edited for this purpose a handbook for operators that is instrumental in the conception and implementation of such products. In the logic of the Centre of Expertise programme, the knowledge developed by LEO is open to other tourism areas in Finland. It is operated by Lapin Elämystuotanto Oy, in which the joint municipal authority of Rovaniemi and the University Foundation of Lapland have major stakes.

Source: Lapland's Centre of Expertise Programme 2003-2006.

produce new ideas as well as being important in innovation processes. Personal contacts are also a major source of information, ideas and advice. Generally, this can be called “everyday networking”. The existence of various support organisations, as well as the perceived effectiveness of these

organisations influence the number of co-operative relationships which firms can be expected to have with such organisations. From this point of view, it is important to have effective arenas for interactions between the economic players in place. The number of co-operative relationships is probably not what influences the innovation processes the most, but rather how well the established relationships are functioning.

One central finding in a Nordic study on innovation systems in the periphery shows that, in most cases, R&D agencies as well as educational institutes seem to have a rather non significant direct role in innovation activities (Nordic Innovation Centre, 2005). At the same time the level of formal education within the firms (especially within the food industry and the tourism sector) is commonly fairly low. Therefore there is a need for targeted actions to be carried out in collaboration between firms and institutes that focus on general capacity building and education. Such institutes can also play an intermediary role, as elements of the innovation system, in linking general capacity building efforts to formal overarching knowledge infrastructure and raising awareness of innovation potential in companies and regions. Adding educational institutes to “everyday networking” can strengthen the innovation infrastructure in rural regions as well as support findings and develop innovations in peripheral areas.

One example of such a practical network including companies, R&D environments and the public sector is VIFU, the small food producers’ network, located in Western Jutland (Denmark; Stoye, 2006). The network deals with practical co operation; network meetings, participation in food markets and market days, marketing of the producers in the network, planning and organising different kinds of arrangements and professional training for the producers in the network, planning and organising study tours for the producers, international contacts and teaching courses in “entrepreneurship in the food sector” in regional vocational institutions. In VIFU, the cardinal point for the network lies in human resources management. Decisive factors are timing, persons and matching in terms of having the right employees on the right tasks to meet users’ inquiries in the best way, but also to find themes, projects and activities that catch their interest. Decentralised thinking, related to competences and project leadership, has presided to the organisation of VIFU, keeping the organisation close to where the small producers are located.

Helping these small initiatives to emerge, disseminating best practices and encouraging networking is clearly the role of a national facilitator organisation, with adequate funding completing local public or private financing. An interesting approach from this point of view is that taken by the Castilla y León region of Spain (European Commission, 2007) that established in 2002 a network of regional innovation agents to establish a link between

small, mostly rural and remote businesses and existing centrally located technological services. Twelve regional development agents from different academic backgrounds were recruited and trained to form the innovation network. Over two years, close to 1 000 companies were visited, 231 businesses were put in contact with one of six Technological Centres and 63 innovation projects were started in SMEs. The region continues to support the project since 2004 which saw the end of EU co-funding.²⁸ The project is run in partnership between the Regional Council of Chambers of Commerce and the Economic Development Agency.

In Norway, there is a wide spectrum of policy tools to promote innovation in rural areas (see Section 2.3.1 above) but these seem organised rather differently than the preceding examples. They are mostly sector oriented and delivered top down, although Innovation Norway plays an important role in counties by direct contact with businesses. With funding from many different sources and the county not having a fully holistic vision of development aims in its area because of the present sharing of responsibilities with municipalities on one hand and the national level on the other, fragmentation does not readily permit to benchmark the overall efficiency of different measures and ensure that they rather develop synergies than over lapping. Public Private Partnerships (PPPs) are also crucial in the success of the cases indicated above. These are well developed in many parts of Norway, but seeking to develop these more systematically at a small scale in small local environments with support from the county level, could provide in the future a certain impetus to explore new innovation delivery mechanisms.

The role of SMESTOs

There are 16 medium-sized cities (15 000 to 50 000 inhabitants) and 27 small towns (between 5 000 and 15 000 inhabitants) in Norway, representing 40% of the population. Twenty-three cities are located in target areas for regional aid and amongst these, 11 experience negative demographic developments. The attractiveness of these Small and Medium-Sized Towns (SMESTOs), in particular in terms of services and job openings, is crucial to retain young inhabitants and even attract incomers, for instance qualified immigrants. Innovation, usually comforted by the presence of institutions such as university colleges, can strongly contribute to this by developing new activities, thus instilling a spirit of confidence in the future of the area. Various policy measures targeting rural areas and their centres have been presented in Section 2.2.1 and further analysed above. Measures to comfort their public service delivery role are examined in the next section. This shows that these areas and primarily their rural hubs benefit from a wide spectrum of measures, in which innovation plays a major role. The SIVA network of

business gardens and incubators in particular is testimony to this, as are other measures in favour of rural areas (see Section 2.3.1).

New programmes are being launched in Norway to promote even more these small and medium-sized cities and towns as attractive living options. The programme for “Attractive and Environmentally Friendly Towns” (2000-2005) and now the programme “Beautiful Towns” (2006-2009), at the initiative of the Ministry of the Environment, are good examples of this. Besides the contribution of such national programmes, adding to the impact of certain sector policies such as transportation, regional initiatives can usefully be comforted, as they express a local understanding of the need for co-operation to strengthen the role of a hub in its area. In Nordland, the initiative comes from the county, aiming to develop the role of three cities that contribute directly to development of the whole region. The role of innovation needs to remain central in these different measures but in a networked fashion, as critical mass cannot always be easily attained in rural environments.

The economy of rural, remote and peripheral areas in most countries is highly dependent on the growth of small and medium-sized cities. These cities and towns act as service and business centres for their outlying areas and can be growth engines, in particular through innovation, for their small region. A healthy network of such small and medium-sized rural hubs is thus a major policy concern. The role of these medium and small-sized centres in rural development has been underlined by OECD in a publication released in 2006 (OECD, 2006e). Small and medium-sized cities are central players in the rural areas to counteract the polarisation of urban growth and maintain the settlement pattern (Nordregio, 2006). Their specific role is also recognised and supported in Ireland by the Irish Spatial Strategy (ISS) that seeks to foster more balanced territorial development patterns in the country. In Finland, the Regional Centre Policy (RCP) aims to sustain their growth by specific measures combining incentives for co-operation between municipalities in the area and support to economic development. In Luxembourg, Centres for Development and Attraction (Ministry of the Interior of Luxembourg, 2003), at different levels, aim in particular to better associate rural hubs to regional development processes.

2.3.4. Innovation policies for North Norway

North Norway features

The main features of North Norway have been presented in Section 1.4.1. It can be recalled that the three northernmost counties of Norway, Nordland, Troms and Finnmark cover one-third of Norway’s mainland area for 10% of the population. Tromsø is, with 64 000 inhabitants in 2006, the largest municipality amongst 88. Compared to the rest of Norway the northernmost

parts include mostly sparsely populated, scattered settlements. Out-migration from the region is a dominant feature, with the exception of urban centres like Tromsø and Bodø. North Norway is heavily reliant on a natural resource-based sector and public sector transfers and services. There are more unemployed persons and receivers of disability benefits than in the rest of the country.

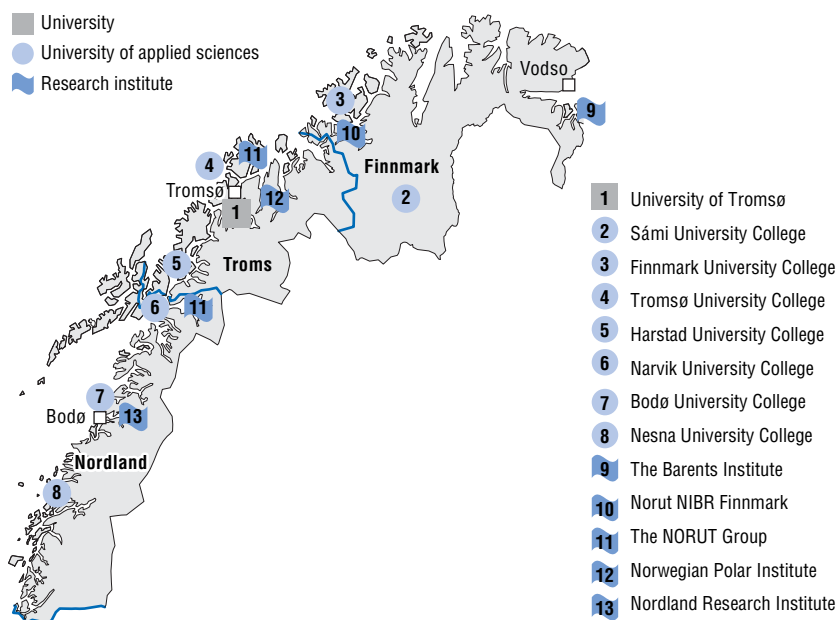
As the main industries are traditionally dependent on raw materials and that the share of very small firms is higher than elsewhere in the country, Innovation activity in the three counties of North Norway is comparatively low (see Section 1.2.4). Few enterprises pursue R&D and access to (risk) capital is also below national average. Empirical studies effectively show that North Norway scores low as compared to other regions on indicators used to measure innovation and R&D intensity. In particular, the amount of innovation and R&D activities performed inside firms is low as well as the number of man-labour years in the R&D sector.

The geographical situation of North Norway complicates access to global markets in terms of distance and costs. Railroads do not go further than Bodø. Shipping and air routes are the main links to the rest of the country. ICT infrastructure is rather well developed as in the rest of Norway but not all small communities are adequately served (see following section). These cumulative factors make it more difficult for most firms in North Norway to achieve critical mass and reach a wide customer base. In spite of climatic difficulties created by extreme latitudes and these inherent weaknesses, North Norway holds big promises with its wealth of petroleum resources from the Barents Sea and development of tourism. The growth of Tromsø, boasting the world's northernmost university, illustrates these perspectives.

Educational institutions and innovation dissemination

North Norway has a relatively good network of educational and R&D institutions which contributes to innovation developments (Figure 2.7). The central actor is the University of Tromsø, with the city playing a leading development role in North Norway as a provider of higher educational services for the whole of North Norway. The creation of the university in 1968²⁹ was a deliberate policy step, decided to train young people so as to retain them more easily in the area. Lines of study include medicine, pharmacy, psychology, law, social sciences, humanities, science and mathematics as well as fisheries. The creation of the faculty of medicine in particular aimed to solve the shortage of practitioners in that part of the country. The university has succeeded quite well in this respect as the majority of doctors studying in Tromsø now seem to stay in North Norway as indicated by different local actors.

Figure 2.7. Educational institutions in North Norway



Source: Ministry of Local Government and Regional Development.

There are approximately 10 000 students studying in Tromsø in 2006 (more than 6 600 in the university), with close to 70% coming from the region. Near to 10% of University enrolment concerns foreign students attracted by teaching standards equivalent to those in other parts of Norway and many Master programmes taught in English. The University engages in basic and applied research with a special commitment to inter-disciplinary research efforts focusing on the needs and problems of the North. Areas of specialisation include biomarine studies, biomedicine and biotechnology; health and welfare studies; indigenous studies (Sami language and identity), and northern/Arctic studies focusing on different disciplines (technology and science, social sciences). The latter link up with the Norwegian Polar Institute and the Polar Environmental Centre, both located in Tromsø.

The University Hospital has acquired national and international renown in the field of telemedicine. The Telemedicine Department, opened as early as 1993, was identified by the Ministry of Health as a national competence centre. What is now the Norwegian Centre for Telemedicine (NST) acquired in 2002 recognition from the World Health Organization (WHO) as its first telemedicine “Collaborating Centre”. The centre, employing around 110 people, engages in R&D by gathering, producing and providing knowledge about telemedicine nationally and internationally and ensuring that e-health is

integrated into health service provision. NST produced at the beginning of 2007 a report on telemedicine in Norway (Breivik, Rye and Linstad) that is analysed in the following section of this review.

As a higher education institution, Tromsø University contributes to regional development by knowledge dissemination in the region and promotion of partnerships with the private sector. It set up in 1992 the Norut Group of which it is the main owner, jointly with the Ministry of Fisheries and Coastal Affairs to promote R&D and develop networking with firms and other educational and research institutions such as university colleges and technical institutes located in other parts of the region, for instance such as Bodø and Kirkenes.

The Norut Group has R&D activities in a total of five municipalities in North Norway (Norut Group, Ltd., 2006). The Norut Group Ltd. (Box 2.6) develops research activities relating to innovation policies and strategies, making recommendations to county and national governments. Norut Group activities cover a wide range of issues related to northern specific issues, like

Box 2.6. **The Norut Group**

Norut Group Ltd, founded in 1992, with activities in Alta, Tromsø, Narvik, Bergen and Stavanger has close to 300 employees. The subsidiaries are non profit research companies, except NorInnova, which is a general private limited company. The subsidiaries are the following:

- Fisheries;
- Norut IT;
- Norut NIBR Finnmark (Norwegian institute for urban and regional development);
- Norut Samfunn (Norut Social Science Research, Ltd.);
- Norut Technology;
- Norut Petroleum North.

Selected project profiles:

- Export-Oriented Business Development and Project Establishment;
- Arctic Strategic Impact Assessment, aiming to identify stakeholders, scope and themes of interest for oil companies in the Arctic;
- PhenoClim – Phenology as an indicator on climate change effects;
- Disciplinary integration in natural resource management (NRM) research;
- Energygrass: bioenergy in cold climate.

Source: The Norut Group Ltd (2006), *Annual Report 2005*.

exploitation of natural resources, climate change and provision of services in peripheral conditions. NORUT is, since 2003, the main owner of NorInnova, the only Knowledge Park in Norway where the university directly owns the facilities. NorInnova helps to commercialise business ideas by offering support in form of equity capital investments, seed capital, innovative environments and incubator activities. NorInnova has activities within the following areas:

- Innovation: IPRs, and development of business concepts based on research and new technologies.
- Equity capital investments at an early stage in new enterprises, supported by an active commitment in business development (seed capital fund of NOK 50 million).
- Innovative environments: innovative forums and sessions between R&D communities, entrepreneurs, companies and public authorities.

Innovation programmes in North Norway

NT

North Norway as a priority regional development area has its own innovation programme, “NT” (Innovation and new technology programme). This programme contributes to the creation of new technology companies while supporting technological development in others. Financial support and professional assistance are provided for the development of products and/or production methods, from conception to market launch. NT also contributes to competence enhancement and project management for qualified firms and can recruit researchers for a limited period. Eligible projects should be technologically advanced and have substantial market potential. The marine sector, ICTs, telemedicine and space and satellite technology are the main focus areas in the most recent programme period. NT is overseen by the Ministry of Local Government and Regional Development, with a budget allocation for 2007 of NOK 12 million. The programme instrument consist of funding capital (25% to 50% of investment, with a maximum of EUR 0.3 million/project), provided with strong focus on networking and project supervision by an NT adviser.

Evaluations have consistently given the programme much credit for its results and work-modes. It was first positively evaluated by the STEP Group at the beginning of 1996 (Isaksen, 1996), which led to its continuation. It was considered that the working methods and the approach chosen by the NT secretariat were well adapted to industrial conditions in North Norway. The programme identified and reached a relevant group of companies that were able to innovate and show positive results. It managed to follow up projects. Still according to the evaluation the programme’s approach also made it possible to see the innovation process in a larger, integrated context, often

following the development of products and processes from the conceptual state through development and marketing.

The second evaluation of the NT-programme demonstrated that there is a continued need for this kind of programme (Norut samfunnsforskning and Ernst & Young, 2000). The level of R&D activity in companies in North Norway hasn't changed significantly since start of the programme but firms seem to be better prepared regarding competences, experience from project work, networking and ability to make use of relevant regional assistance. The main contribution of the programme was of a financial nature. The last evaluation concluded that the programme could be regarded as beneficial from a national viewpoint and that its additionality was high. Results show a success rate of 35%, probably due to strict focus on concrete and viable activities.

Arena

There are 3 Arena Cluster programmes in North Norway: a Tourism cluster, the Seafood cluster North, and SIREN (Space cluster). The Tourism cluster project, started 2006, aims to develop innovations and business within nature and culture-based tourism in Finnmark. The cluster is seeking to obtain "Norwegian Centres of Expertise" (NCE) status before 2008. The cluster project is structured as follows: analysis (develop knowledge to support business development), competence development (raise the level of expertise in the field of tourism business), meeting places (support networking), Innovation system (aiming to develop the innovation system for tourism in Finnmark), as well as pilot projects (create business-driven projects). The project is co-ordinated by Origo Nord AS, an innovation agency located in Alta and owned mainly by the city.

The Seafood cluster North started activity in 2001 and became an Arena programme project in 2003. The main goal of the cluster is to develop and strengthen the regional innovation system in Finnmark and North Norway to support sea related businesses. The main part of the activity is to network companies, R&D environments and other central players in the sector. The strategic approach for cluster work is to create value chains and support different parts of the value chain in their respective roles. Innovation is thus linked to biology, business, logistics, marketing and sales expertise.

SIREN is a nationwide space-related Industry Research and Education project. Targeted areas are business clusters within space and earth observation industries. The main focus is in North Norway and in the environments of Andøya, Narvik, Tromsø and Svalbard. The partnership includes all the relevant space related companies and institutions from the region, with Innovation Norway directly involved in the process. The cluster aims to stimulate better co-ordination between education, R&D and

businesses; contribute to the development of organisational models, market strategies and branding; promote the use of existing infrastructure and benchmark production competence.

Innovate North

“Innovate North”, initiated in 2004, focuses on lifting barriers to innovation in the three northern counties. The hypothesis is that the particularly low innovation rate is explained by the business structure (mainly small and medium-sized companies with limited innovation capability) and by distance to markets and competence centres. Networks between businesses and between enterprises and R&D environments are also poorly developed. This situation offers scant job opportunities or career perspectives for young people, stressing the need for more competence based job alternatives, a major challenge for North Norway to be able to develop its economy in the future. Three projects with significant public support (EUR 350 000) have thus been defined. These meet new criteria stressing commercial potential and the need for long-term and complex development involving research institutions. It is also required that at least 3 companies working together with complementary competencies and a more diversified one co-operate in the value chain. The learning created in the process is part of the final deliverables scheduled in 2007.

Tromsø as an innovation engine in North Norway

The major challenge facing Tromsø is how to effectively leverage for the whole of North Norway and the private sector the reservoir of talent and creativity located in the university and the many specialised institutions situated in the wider area. The inherent handicap of distance and low population density cannot be ignored, making it difficult to forge a truly common identity, although Tromsø is geographically at the centre of the three counties. Bodø and surrounding areas retain their mining and industrial features, Tromsø is now more of a knowledge centre and Kirkenes is focused on the tremendous gas and oil reserves of the Barents Sea, with big projects such as exploitation of the Snowwhite field and related LNG terminal (see Chapter 1). Of course, there are strong common features such as climate conditions and a well spread activity like fishing. How can different characteristics be overridden and shared traits be exploited so as to foster a stronger spirit of co-operation?

Strong networking is obviously the main answer, along the model developed by the university itself with the university colleges and the other learning and research institutions situated in North Norway. Networking necessarily leads to partnerships that should be systematically encouraged. The whole region benefits from specific attention by national authorities, whether through various fiscal and grant schemes based on objective

demographic characteristics or through special programmes devised uniquely for North Norway. These resources could be more efficiently used if different programmes were geared not only towards measurable project results but also towards working methods and processes leading to long-term co-operation. If Tromsø, as the leading city in North Norway, is to unleash its growth potential for the whole region, it needs to follow jointly two paths. One is stronger co-operation within North Norway, the other is increased internationalisation.

The Executive Committee for North Norway³⁰ (ECNN) which also includes North Trondelag could be a possible framework for developing co-operation. However, besides the fact that it is spread over a wider area, it is mostly a useful forum for exchange of information facilitating synergies between sectors in the wide area more than a body directly driving projects. In the latter case, a growth pole approach is required, with the main city assuming a certain degree of leadership and this being recognised by its partners, in the common interest of North Norway. The other angle, pursuing the same goal, would be regional reform, if the future map of counties would retain a single region comprising the present three counties of Nordland, Troms and Finnmark. Of course, such a perspective is not easily opened but without such an ambition, whatever option is chosen, it appears difficult to improve the efficiency of present policy delivery, aiming to retain population in the area.

The example of Oulu in northern Finland could be pondered from that point of view. The City of Oulu is a successful growth engine for that part of the country and, alongside national regional policy measures, has been taking initiatives of its own to foster economic growth across the whole of Northern Ostrobothnia that stretches from the Gulf of Bothnia to the Russian border, recognising in particular that closer firm linkages benefit the whole region. Helping to maintain activities in more peripheral regions can promote supplier chain approaches for firms located in the regional capital. The collaboration with other centres, called “1+3”, links Oulu and smaller centres since 2001 within a network which works towards the same goals in promotion of regional development (Box 2.7).

Tromsø is already engaged in many activities resulting from leverage of its assets such as polar research or use of local difficulties (low density, distance) to devise adequate responses (telemedicine). In these fields, Norway has acquired international excellence and co-operation with institutions or firms in other countries in these areas is growing. In particular, the northern dimension, enlarged to Finland, Sweden and Russia is developing through different agreements such as Interreg and Interreg Barents. Another interesting initiative is Multipolis (OECD, 2005e), launched in the year 2000 that brings together knowledge centres and firms in these countries with a focus on high technology, in the areas of telecommunications, wellness and cold climate conditions. Pursuing such types of co-operation with reference to an overall

Box 2.7. Council of Oulu Region's 1+3 regional centre network

This network of four different profile centres in Northern Finland comprises the following areas:

Oulu: the regional capital (population of 130 000, Greater Oulu, 175 000), with a strong ICT base (Nokia in particular); **North-East** (population 30 000): Tourism, ICTs; **Raahе** (population 35 000): Steel; **Oulu South** (90 000 inhabitants): hi tech wood and mechanical products; ICTs. The role of the network is to facilitate exchange of information between the municipalities so as to better comfort positive trends and develop strategies to counter negative ones:

- Inward migration issues;
- Identification of development possibilities within each centre;
- Fostering of joint projects;
- Development of focus areas in separate centres;
- International aims through joint promotion.

Source: Council of Oulu Region (2006), Regional Development Programme, 2007-2010.

strategy for internationalisation rather than on a case by case basis would bring added value and facilitate attracting potential international investors. Specific promotion of the whole area in the international arena could be another step, with set-up of a kind of an Information Bureau for North Norway with presence abroad, perhaps under the umbrella of Innovation Norway.

Bringing together these different policy perspectives would require a vision for all of North Norway including the insular parts such as Svalbard. The whole region is facing major challenges bringing new opportunities in the fields of climate change, tourism and the environment. Potential conflict can arise between different concerns such as exploitation of mineral resources, fishing, tourism and protection of eco-systems. To overcome these potential contradictions while fostering balanced territorial development within the whole region, greater co-operation between the major urban centres of North Norway and increased internationalisation need to be linked to a strategy that local actors could define jointly with national authorities.

2.3.5. Summing up

Policy framework and tools

As seen in Chapter 1, Norway appears rather innovative, with high levels of productivity in many sectors. Policy pursues promotion of innovation across all regions, with, in many cases, a deliberate bias towards district assisted areas and North Norway in particular, where the growth of Tromsø is

testimony to the success of well targeted policy measures. The broad picture is thus positive. However, the system appears rather complex with multiple actors and programmes sometimes overlapping and in spite of efforts, innovation still remains difficult to apply in traditional environments. Can the policy scenery be simplified, making more room for programmes inspired by the principles of the promising Norwegian Centres of Expertise based on competitive calls for tender?

Urban innovation

The lack of a comprehensive urban policy in Norway up to now, although certain traits of urban policies can be found in different policy tools, has not permitted to clearly bring forward the links between urban development and regional competitiveness. Can Oslo and other major cities better contribute to regional development by continuing to build strong innovation based clusters without increasing present territorial imbalances due in particular to inward urban migration? Can stronger networking between these cities and with the North as well as with medium-sized cities in different parts of the country provide part of the answer? Once again, regional reform but also delivery of the first-ever White Paper devoted to the capital city area, as well as an impending White Paper on innovation can bring these important issues into proper focus, by seeking to conciliate global challenges and regional development concerns.

Remote and rural areas

An important knowledge infrastructure is deployed by Norway in rural and even remote areas but lack of training and human resources in SMEs is often an obstacle to full use of these capacities. What kind of policy measures could help to better leverage the knowledge infrastructure in areas with mostly traditional activities that are losing population? Are there ways of better consolidating the role of small and medium-sized cities to this end? It seems that development of support measures but also incentives to foster intermunicipal co-operation in the area of innovation activities could contribute towards solving the problem of critical mass and economies of scale. The best example relates to ICT projects by common use of infrastructure and services (see next section).

North Norway

North Norway holds great promises with its wealth of natural resources, the only question being how to effectively leverage these for the benefit of the regional economy. Achieving this also means attracting new inhabitants to an area that continues losing population, even if Tromsø and Bodø are growing. Can better exploitation of North Norway opportunities be sought by closer co-

operation between the three counties and the three leading urban areas in North Norway? Can stronger “knowledge spillovers” towards the rest of the area occur from Tromsø? How could the exceptional tourism amenities and polar research be better promoted?

2.4. Service delivery in areas with population decline

2.4.1. Policy challenges

Norwegian policy is committed “to give people a real choice about where they want to live” and that “everybody in every part of the country has the opportunity to develop their abilities and ensure quality of life. The good life can be achieved in rural as well as in urban communities. The government places prime importance on fostering equal opportunities across the country and sustaining in large measure the present settlement pattern.” (Ministry of Local Government and Regional Development, 2006b). The implications of this statement relate to economic growth and to service delivery as basic components of living standards. The aim is to make small towns attractive to young families, to foster employment opportunities and adequate public services, to provide culture and leisure activities as well as a socially attractive environment.

Achieving equivalent public service delivery for all regardless of place of residence implies that areas of population decline, most of which are rural and/or remote and sparsely populated, will provide services to the citizens of these areas at a higher unit cost than that of more populated areas for equivalent standards. Two hundred and twenty-eight Norwegian municipalities out of 431 have experienced negative population growth between 1997 and 2006 according to Statistics Norway. The negative growth ranges from the municipality of Odda (2006: 7 247 inhabitants) in the county of Hordaland, with a net decrease of 714 inhabitants in the period to a decrease of five inhabitants in that of Alvdal (2006: 2 392 inhabitants) in the county of Hedmark. A systematic comparison of service dimensions in several groups of municipalities will show how the endeavour of implementing equal standards has been met in Norway. The groups are the following: all municipalities together (including Oslo as for most of the issues under consideration results without Oslo did not change outcomes significantly), municipalities that have had an overall negative or positive population growth between 1997 and 2006, and the 30 municipalities with highest negative or positive population growth in the same period.

Municipalities and counties are important providers of education, health and social services on the basis of national standards defined by law. Standards refer mostly to quantitative input ratios or resources related to population (number of physicians per 10 000 inhabitants, number of pupils

per class) than to measurable output standards (health condition of the population) or perceived quality standards (satisfaction with the level of service). Funds for local welfare services are largely provided by block grants (unconditional) and to a lesser degree by earmarked grants. The equalisation system (see Chapter 3) normally covers additional unit costs or lack of fiscal resources due to a narrow tax base. Municipalities with population in decline are nonetheless in tight financial situations as there are still some loopholes in the system, in particular threshold effects³¹ that are not entirely compensated.

The organisation of service delivery is largely left to the initiative of municipalities that have to manage their available own and transferred financial resources with efficiency. As a part of this freedom of organising delivery within the scope of national standards compliance, municipalities decide in which proportions to allocate spending in education or social services, although national standards can require expenditure from local authorities in a specific item that is not necessarily a local priority. Municipalities have to deal with “competing” local priorities, such as education or care of the elderly depending on their resources and the special needs arising from the population structure and national standards decided by sector agencies or departments.

Furthermore, the public sector can no longer provide services that an ever demanding population requires in sparsely populated areas uniquely with traditional means. Classical ways of locating offices and service points where citizens live are no longer sustainable. Services profit from the opportunities offered by ICT and this has been an overall and sector response to the problems of service delivery in less populated areas. However, ICTs provide technological solutions that have to be adapted by organisations. Political and administrative systems are organised as “silos” in which little concern for cross-sectoral issues is shared by ministerial departments or local service units. ICT solutions require more “join-up” government and less do-it-yourself strategies. Join-up government is not only relevant for central level agencies and ministries but also for the interwoven network of local-central relations in service delivery.

Conciliation of national welfare standards with the recognised autonomy of local authorities to adapt national solutions to local needs and demands proves not to be easy. In Norway, certain scholars (Fimreite and Læg Reid, 2005) witness a centralisation of central-local government relations through standardisation, legislation and conditional financing of the welfare state. Mistrust in local government seems to underline this centralisation process, but without devising join-up strategies with local authorities, the welfare system faces serious challenges. Examination of policy documents and evaluator reports on the different issues to be explored in this section tend to

demonstrate that some of the inter organisational problems are recognised and worked upon, while others still need more impetus.

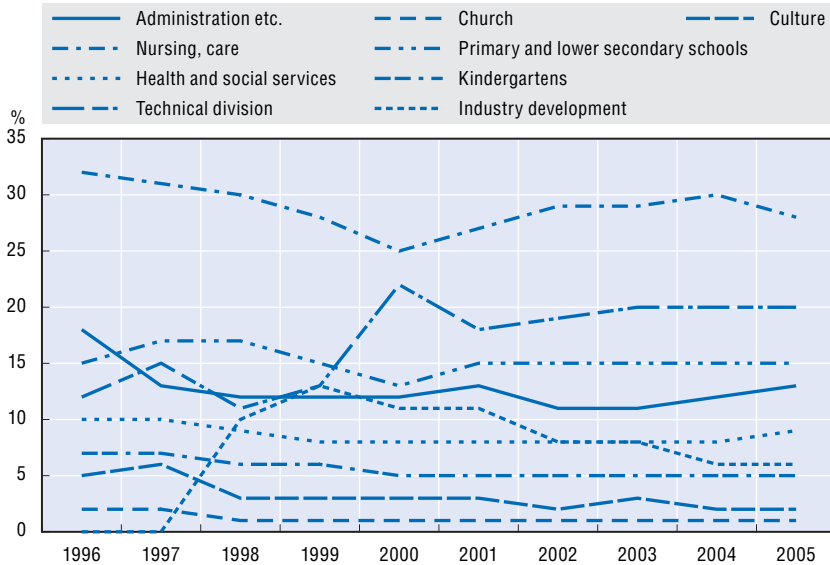
The explicit or sometimes implicit policy response to the challenges posed by the delivery of services in sparsely populated areas can be understood as a combination of two distinct theoretical frameworks that have been analysed by a Norwegian author (Aasbrenn, 2006). The first framework, with reference to central place theory, focuses on “threshold” (minimum sales for an enterprise to survive) and “range” (maximum distance from which an enterprise attracts customers). In order to overcome the problem of distance to the point where services are delivered one should combine the decentralisation of services according to the subsidiarity principle and reduce geographical distances whenever possible. This theory is based on the direct relationship between public authorities and the individuals and founded on the sole responsibility of public authorities to deliver services. The second framework goes beyond the issue of distance and public authorities as single providers. It includes all actors involved in service interactions (public, private, individuals and voluntary organisations). This approach implies that consumers are also proactive and thus become “prosumers” that “co-produce” services.

In many countries, the public sector is precisely relying more and more on civil society for delivering services in rural areas. This is particularly the case in the United Kingdom (Defra, 2005). Voluntary organisations, neighbours and the users themselves will probably have to be proactive if they want to continue living where they want to. In this case join-up strategies and encouraging voluntary work will be some of the tasks of the future in countries like Norway where specific constraints require innovative approaches, whether in education or in health and care services in areas of declining population that are dealt with in this section.

2.4.2. Policy responses

Municipalities provide a wide variety of services, with more than half of the budget on average devoted to welfare services (nursing care, health and social care, education for kindergarten, primary and lower secondary schools) in municipalities with negative population growth. Figure 2.8 presents the case of the municipality of Rendalen in Hedmark. The municipality of Steigen (Nordland), also visited by the OECD, shows a comparable evolution. Both are considered to be typical of Norwegian municipalities experiencing population loss. Due to ageing trends, welfare expenses tend to be on the rise in the most recent period (since the year 2000) whereas schooling expenses tend to stay level or decrease in proportion.

Figure 2.8. **Municipal expenditures by category in per cent of total in Rendalen (Hedmark)**



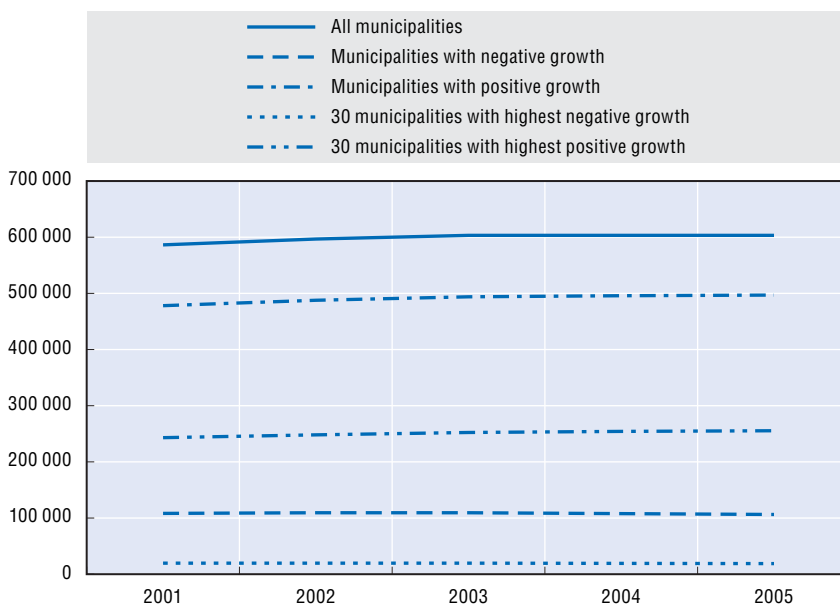
Source: Information provided by the municipality of Rendalen.

2.4.3. Education

Counties are responsible for upper secondary education, vocational training, and adult education. Municipalities are in charge of kindergartens, primary schools and lower secondary education; they oversee private day care institutions and kindergartens. Schools in Norway are often quite small. In 2004, 36% of primary and lower secondary schools, containing 9% of the pupil population, had less than 100 pupils (OECD, 2004b). These figures highlight the issues facing the school system in remote rural areas: containing costs per head while delivering quality schooling to all with a proportionately reduced teaching staff. Main problems result from the declining number of pupils, especially in the most sparsely populated areas, the closure of schools, ever growing distances and need of school transportation. Reduction in state transfers due to a dwindling number of pupils leaves open the issue of fixed costs.

In 2005, municipalities owned 2 990 primary and lower secondary schools with 603 306 pupils (see Figure 2.9). The number of pupils stabilised around 603 000 between 2003 and 2005. The decrease is particularly noticeable especially in municipalities with negative population growth while municipalities growing in demographic terms have witnessed a correlative increase in their number of pupils during the period under consideration.

Figure 2.9. **Number of pupils in primary and lower secondary schools (2001-2005) in Norway**

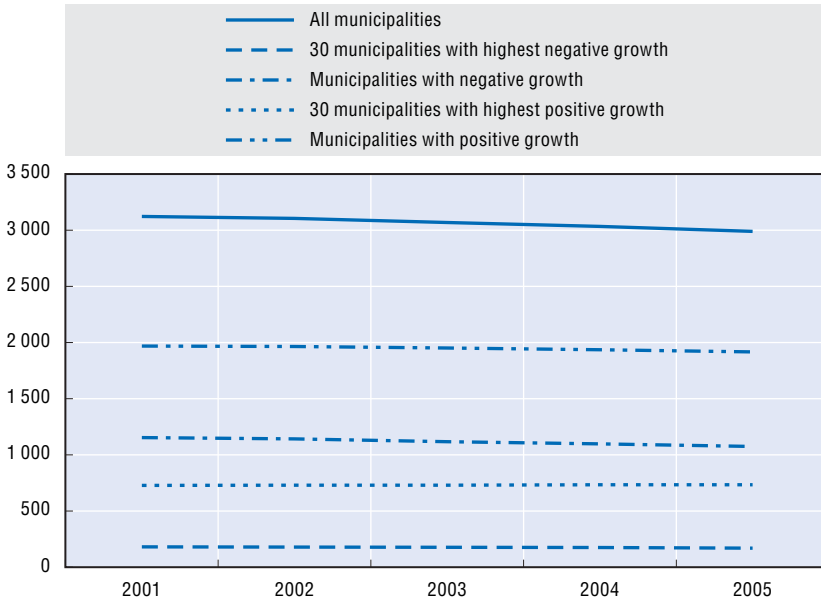


Source: Statistics Norway.

A continued decrease of the number of pupils would entail an increase of closures and mergers of primary and lower secondary schools in less populated areas. The municipality decides on public school closures, particularly since there are no legal minimal requirements to keep a school open. With decreasing numbers of pupils, more school closures are expected. Data available (see Figure 2.10) shows that the primary and lower secondary public school decrease was of 133 in the whole country between 2001 and 2005. The downward trend has been experienced in both municipalities with negative and with positive population growth. However, the municipalities with population in decline (also the least populated) account for 60% in the decrease of the number of schools. The only positive trend can be seen in the 30 municipalities with the highest positive demographic growth since 1997.

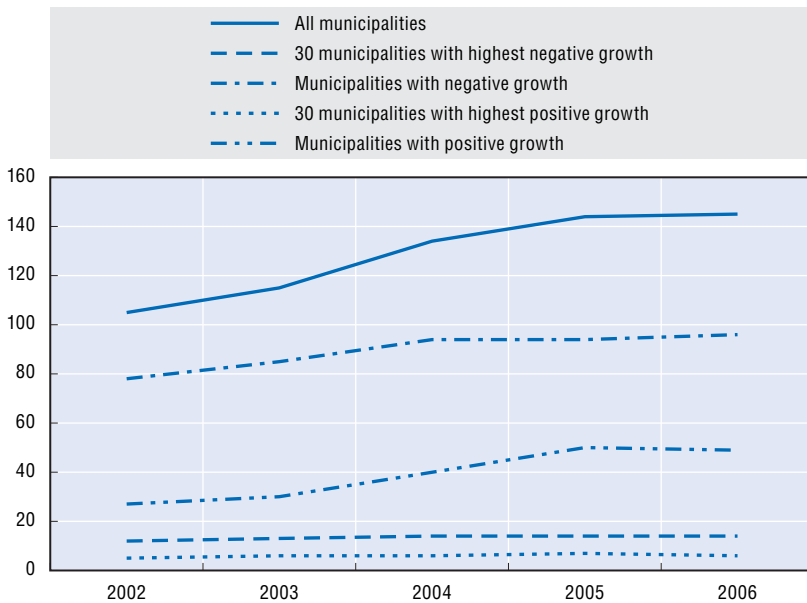
A possible answer to public school closures is the establishment of private schools by parents, allowed in Norway, although in June 2006 Storting decided a pause while waiting for a new law. Some limited exceptions were accepted, mainly concerning the establishment of rural schools. The draft proposal grants private schools the right to state contributions with the minimum requirement of 15 pupils at each private school. The number of new private schools has been growing (see Figure 2.11) in the last five years (except for 2006 as a result of the pause decided by Storting). Although the absolute number of private schools is

Figure 2.10. **Number of primary and lower secondary public schools (2001-2005) in Norway**



Source: Statistics Norway.

Figure 2.11. **Number of primary, lower secondary private schools (2002-2006)**



Source: Statistics Norway.

higher in municipalities with population decline, higher growth of new private schools has occurred mostly in those areas with positive population growth. Conversely, there is no significant increase of private schools in the 30 municipalities with the highest negative demographic growth. In the school year 2004-2005, 55 primary and lower secondary schools and 10 special schools were closed. 18 of the closures were related to an organisational change, like a merge with a lower secondary school to form one unit (grade 1-10). In the same period 15 new schools were established, of which 10 were private schools.

The closure and merger of schools has a direct impact on transportation. It is difficult to ascertain any trend of higher use of public transportation in the same period in which schools have closed down. However, Table 2.7 shows great differences regarding the percentage of pupils entitled to public transportation. When all municipalities are considered, 22.6% of pupils use public transportation. In areas of population decline, 42.1% of pupils are entitled to public transportation while in the 30 municipalities with highest positive population growth only 9.2% use public transportation. Public transportation paid out of school budgets is costly judging from figures concerning Rendalen primary and lower secondary schools where around NOK 1 million went to pay public transportation costs in 2005.

Table 2.7. Percentage of pupils entitled to public transport in 2005 by municipality type

	Total pupils	Percentage of pupils entitled to public transport
All municipalities	602 604	22.6
Municipalities with negative population growth	438 069	42.1
Municipalities with positive population growth	164 535	18.2
30 municipalities with highest negative growth	80 173	37.1
30 municipalities with highest positive growth	15 647	9.2

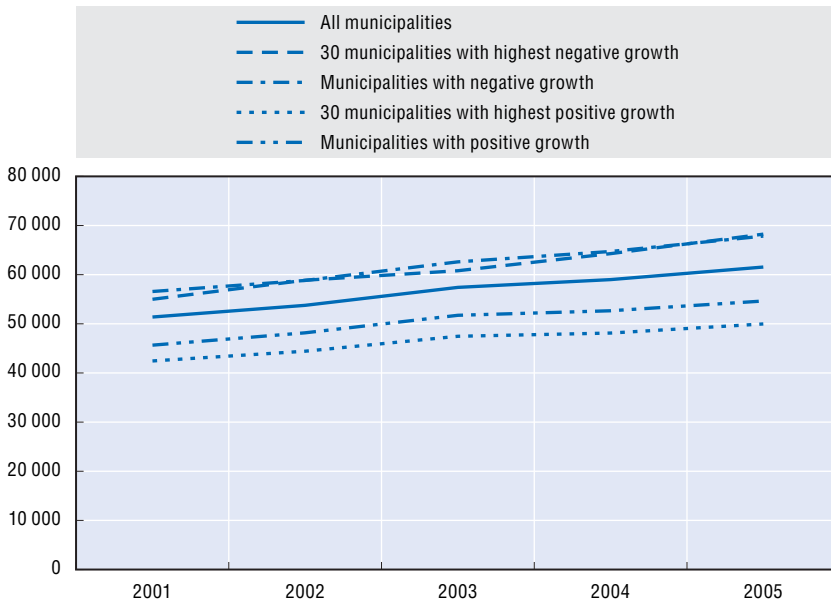
Source: Statistics Norway.

Norway funds its education system at a generous level (OECD, 2004b). Its overall expenditure on primary schools per pupil is nearly 50% more than the OECD average and second only to Denmark. The expenditure patterns change considerably between areas with positive population growth and municipalities with population decline. The average expenditure per pupil in municipalities with positive population growth is below the general average and considerably higher for municipalities with population decline. Expenditures per pupil are increasing in those areas in which the number of pupils is diminishing.

Norway also has low ratios (11 pupils per teacher average) between the number of pupils and the number of teachers in primary and lower secondary

Figure 2.12. **Average wage expenditure per pupil in primary and secondary schools**

NOK: 1 000



Source: Statistics Norway.

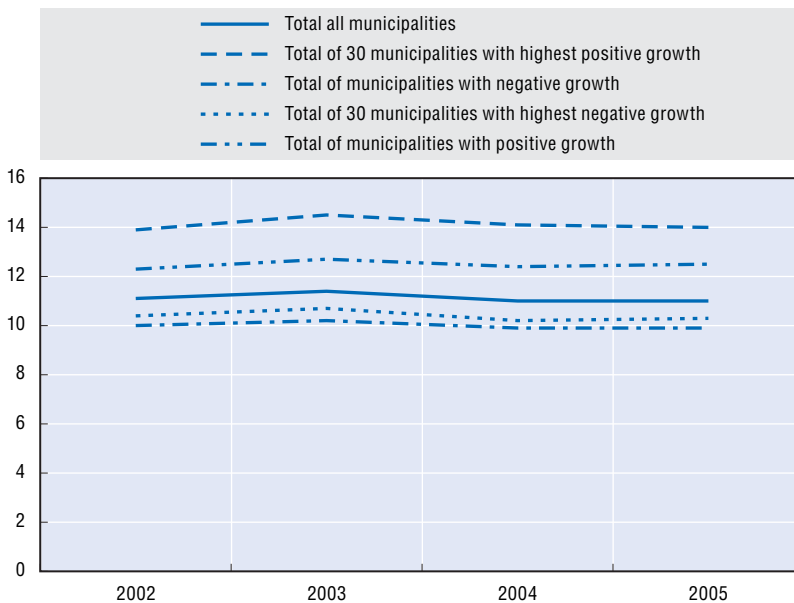
education. Only Denmark has a lower ratio in its primary phase. Norwegian ratios are considerably more generous than OECD averages. As expected, the ratio of pupils to teacher averaged 14 among the 30 municipalities with the highest positive growth, while municipalities with population decline had even a more generous ratio with 9.9 per teacher, which has direct implication in higher costs for these municipalities, as fixed costs are maintained. In spite of these ratios, there still is a lack of certain teaching skills in rural areas, justifying a pooling of teaching resources between schools thanks to the introduction of ICTs permitting distance learning from an extended classroom (see further). Future plans in the field of education relate to planning an increase in the density of teachers in rural areas and to improvement in the capacity of education for teachers. Since 2005 the minimum training requirements were sharpened in an effort to increase recruitment in the long run.

The above-mentioned OECD (2004) report states that Norway has an expensive education system albeit with mixed results in terms of achievements (see Chapter 1). Norwegian 15-year-old pupils perform only at an average OECD level in international tests while assessments of adults of varying ages however show the high quality education of the Norwegian working population, with no striking differences between rural and urban areas. This is certainly the result of

the Ministry of Education focus on homogenising educational standards from a social, ethnical and geographical perspective. In the past, the implications of equity policies on education levels were difficult to assess because the minimum standards applied by central government throughout the country are more related to the number of teachers, investment and the like per pupil. The focus was rather on inputs than on outputs and outcomes.

An Internet initiative (*Skoleporten.no*) of 2004 seems to lay the grounds for comparing other performance indicators related to the results of education. The avowed purpose of this portal website is to present data regarding resources and test results (for instance, reading, writing, English and mathematics), accessible to administrators, teachers and parents. The web- site contains more than 300 indicators, some of which are qualitative. *Skoleporten.no*, as a benchmarking instrument aims to provide comparisons between schools that could help to increase education quality in those institutions that are lagging behind. This could introduce some amount of competitive tension between schools that can be useful to upgrade overall quality in urban areas. However, this will be difficult for sparsely populated areas in which there is little or no competition, as choice is not possible when schools are closing or merging and distance is the limit.

Figure 2.13. **Pupils per teacher with required qualification**



Source: Statistics Norway.

Health

In Norway, following the principles of the Nordic welfare state, the public health system is designed to deliver high quality health services to all citizens, regardless of socio-economic conditions, age, sex, origin or place of residence. This universal system, however, encounters certain geographic variations in distribution, accessibility and quality due in particular to distance, topography and low population density in certain areas. Upholding the principles of equal access to quality health services in all parts of the country, requires permanent concern for cost-efficiency goals, availability of skilled personnel and monitoring of trends in this sector so that the government may be able to oversee the smooth functioning of the overall health and care services framework.

This broad framework is defined by its legal quantitative and qualitative standards, that are monitored by the central government (National Health Board) and by its sharing of responsibilities in the health sector across levels of government. The 2001 hospital reform (see Chapter 3) has given responsibility to the central government for main hospitals, now operated by regional health enterprises, while municipalities remain in charge of primary and elderly care and are funded to that end by the central government through the block grant system, allowing for equalisation in cases of additional costs or reduced tax bases, as detailed in the next chapter. Such a division of tasks requires adequate and permanent co-ordination, as recognised by the National Health Plan (2007-2010) that addresses a certain number of other challenges.

In such a context, overriding geographical or social inequalities in health in a public health system with universal, full coverage for most services, one of the main issues is to ensure that the right amount of resources are allocated to the most serious and frequent health problems, and that health personnel be equipped with the right knowledge, methods and incentives to prioritise right when delivering health services. From this point of view, a major challenge is the increased incidence of lifestyle-related diseases and the fast introduction in the market of new and often costly medical technology and pharmaceuticals. Strong growth in the number of users with varying degrees in incapacity and a greater range of health and social problems require different professional skills and a complete life-cycle perspective on the long-term care services.

Growing needs as a result of an increase in the number of elderly will gradually require expanding the capacity and improving the expertise in ageing, with special focus on dementia and complex illnesses. The scope of the challenges must, however, be viewed in light of the fact that the new elderly generation is in better health and has more resources in the form of higher education and better finances to cope with old age. On the other hand as a result of the ageing of society, there are no major increases in the supply of

manpower and potential voluntary care providers. Stable family care entails the public sector meeting the entire expected growth in needs, and requires a locally-established long-term care service in close collaboration with families, volunteers and the local community.

Co-ordination of care and health services between the different service providers, and between the primary and specialised health services, is central to the efficiency of the system in terms of meeting citizen's expectations but also of controlling overall costs. Service recipients with chronic diseases, dementia, mental health problems and other persons in need of a permanent, multi-services approach are very vulnerable to lack of co-ordination. A need to improve the medical and multidisciplinary follow-up of the home care service recipients and residents of nursing homes and community care housing has been identified by health authorities and efforts are made to that end.

The recruitment, education and distribution of health care personnel to meet evolving healthcare needs is a major challenge, mostly felt by small municipalities and local hospitals or health centres they operate. In Norway, the hospital structure encompasses many small, local hospitals, to ensure easy access to many "basic" hospital services (general health services) whenever recourse to the regional hospital is not required, at least in a first stage. It is a stated government policy that none of these local hospitals are to be closed down. This requires establishing a robust and clear division of labour between local and regional or university hospitals, the latter dispensing services demanding a higher volume or degree of specialisation. This policy entails both centralisation of some types of hospital services and decentralisation of other types of services, with division of tasks between hospitals openly debated, both locally and in Parliament.

On a general level, it is recognised that the Norwegian health system is organised to deliver services of high quality and many indicators are testimony to this: infant mortality rates, in particular, are among the world's lowest. Nevertheless, in a system with shared responsibilities there are great challenges in assuring high quality and the use of knowledge-based medicine everywhere. This is particularly the case in areas of declining population where recruitment of qualified medical personnel is sometimes difficult and where the distance factor requires more than elsewhere, efficient co-ordination. The Ministry of Health and Care Services recently launched a national strategy for quality development of health and social services focusing on means and instruments to enhance quality and exchange experiences between local health and social service providers. Although the focus is nationwide, the specific constraints that prevail within areas facing population loss will, analysed below, will necessarily be considered.

In his recent review of the history of Norwegian health policy during the last 100 years, Ole Berg maintains (Carlsen, 2006) that there has been a shift in the national health policy from distributive justice to efficiency and cost containment. This drive towards efficiency is part of the more general movement of New Public Management, in which performance acquires an enhanced status. Health is one of the sectors world wide in which costs grow at a roaring pace. Specific to Norway and other Nordic countries is the additional cost increase due to the stated goal of delivering an equal level of health care to the population regardless of place of residence. Primary health is more costly in remote areas because of low patient to practitioner ratios, proportionately higher salaries aiming to attract skilled personnel and higher costs of specialist care, due to distances in particular.

One of the challenges identified for the health care sector in the OECD *Economic Survey of Norway* in 1998, “balancing the need for cost-effectiveness and the ambition of maintaining comprehensive health care services countrywide” still remained in 2006, according to the latest *Survey*. Furthermore, despite higher levels of expenditure, territorial variability in how services are delivered in terms of quantity and quality still remain and causes concern among authorities. The 1999 Act on Patient Rights and the 2001 Act on Health Enterprises restated the equity principles in the health care sector as a part of government policy. This means that individuals should be treated equally regardless of social, demographic and territorial conditions. The situation in sparsely populated areas and areas with population decline is a challenge to maintain this equity principle.

General practitioners

From 2001, the general medical services have been organised as a Regular General Practitioner (RGP) scheme. General Practitioners (GPs) are a key part of the municipal health services. There were 4219 man-year physicians engaged in municipal health activities in 2005 according to Statistics Norway. Most of these (76%) are self-employed, 13% of GPs are municipal employees on a fixed salary, 9% are newly qualified doctors serving their compulsory practice period³² and 2% work without a contract. The Regular General Practitioner (RGP) is responsible for the general medical services and information for the persons on the list, as well as referral to health institutions when required. The RGP is further responsible for planning and co-ordinating preventive work, examination and treatment of patients and their follow-up, in particular after discharge from a health institution.

As a co-ordinator the RGP acts as a gatekeeper: granting and denying access to specialist services for patients according to assessment. Besides, a more restrictive referral system was recently introduced. A referral is now

mandatory for the specialist to claim reimbursement from the National Insurance Scheme. The restriction of the referral system is expected to have positive effects in terms of cost control. Results from the evaluation of the regular general practitioner scheme indicate that RGPs are less restrictive as gatekeepers than before the scheme was introduced in June 2001. A qualitative study indicates that RGPs experience more competition among each others, more demanding patients and more responsibility for own patients/listed persons, and therefore provide more services like referrals to specialist health services, reimbursable prescriptions and sick leaves (Carlsen and Norheim, 2003, in Research Council of Norway, 2005).

To some extent, each GP's salary is determined by the size of the list. The regular general practitioner reform (the list system) aimed to improve GP access for patients, to strengthen the relationship between patients and doctors (make for better continuity in doctor-patient relationships) and to attain a better utilisation of the total medical resources by improving the collaboration between levels of services, among others. Patients may choose a GP as far as there is capacity on the wanted list. The RGP and the local authority may agree upon a minimum of 500 and a maximum of 2 500 inhabitants on the list; these are entitled to get an appointment within a reasonable time frame. The lists are currently kept by the Norwegian Labour and Welfare Organisation (the former National Insurance Administration). Inhabitants are allowed to change RGP a maximum of twice a year.

The list plays an important role in GP salaries. The salary is compounded of three parts: one-third consists of capitation-based (directly related to the number of people on the list) reimbursement paid by the contracting municipality, which receives the money from central government through block grants. The other two-thirds are shared by a small fee paid by the patients and the activity-based reimbursements from the National Insurance Scheme. This capitation element replaced the previous basic allowance, the size of which depended upon the number of auxiliary personnel. Small municipalities with less than 5 000 inhabitants can provide an additional capitation fee (a levelling grant) to compensate for short patient lists. In some cases, municipalities pay GPs fixed-wages higher than stated in regular tariffs in order to offer competitive recruitment conditions. This strategy does not always prove to be successful. The municipality of Rendalen (Hedmark) is having considerable difficulty in finding a doctor willing to earn NOK 1 million a year plus additional benefits.

Rise in health care expenditure is also due to other factors. According to the 2005 *OECD Economic Survey of Norway*, healthcare expenditure as a portion of GDP was basically stable until the end of the 1990s. After that, it started to grow at one percentage point higher than the OECD average in some years. Per capita expenditure, the third highest in OECD countries, is more than 50% above the

OECD average. There are many factors explaining this, not only territorial dispersion of population. Among them, the following can be cited: increase in number of nurses, pharmaceutical expenditure, specialist referrals and long-term care beds. The share of municipal expenditure for general medical services (including public general medical work and out of hours services) per inhabitant increased from 66% in 1999 to 83% in 2002 (see Table 2.8) in municipalities smaller than 2 000 inhabitants. The smaller the municipality, the higher the cost per inhabitant. Also, special financial arrangements apply in the Action Zone of Finmark and North Troms (reduction of student loans, up to 10% of the initial loan, maximum NOK 25 000 a year, for doctors working in the area).

Table 2.8. **Municipal share of total public expenditure for general medical services**

	1999	2002
Less than 1999 inhabitants	66.0	83.0
2 000-4 999 inhabitants	64.0	72.0
5 000-9 999 inhabitants	58.0	61.0
10 000-19 999 inhabitants	57.0	56.0
20 000-29 999 inhabitants	55.0	51.0
30 000-49 999 inhabitants	55.0	51.0
More than 50 000 inhabitants	49.0	50.0
All	58.0	56.0
Coefficient of variation	0.10	0.21

Source: Statistics Norway, Primary physician service, municipal expenses, 2002, quoted in OECD 2006.

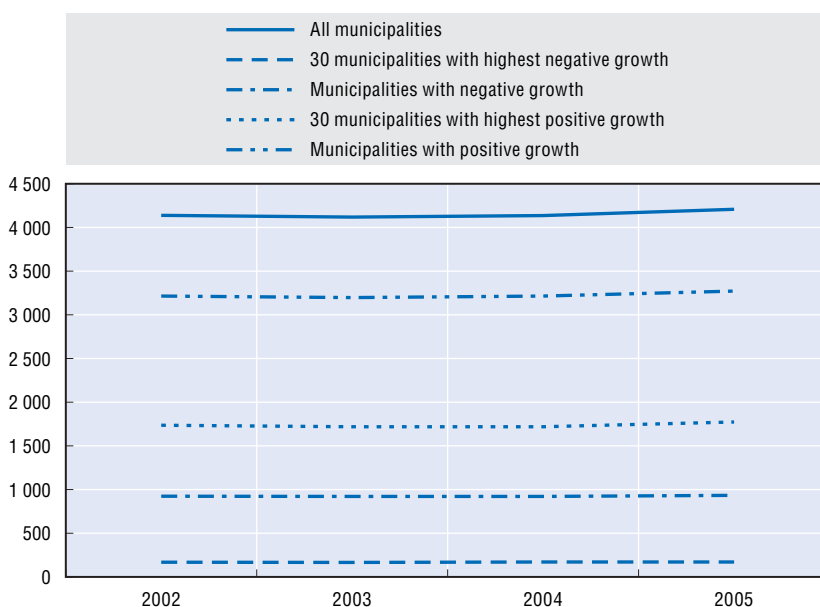
The number and distribution of medical posts between the primary and specialist health services in Norway is controlled by the Ministry of Health and Care Services. Several authors (Askildsen, *et al.*, 2002 and Baltagi, *et al.*, 2003) have analysed the reasons of the shortages of nurses and GPs since the beginning of this century. The problem of recruitment is more acute in remote areas. The number of GPs per inhabitant in sparsely populated areas has to be higher than in more densely populated areas to provide sufficient out-of-hours services. (Table 2.9). There were 13.5 physicians per 10 000 inhabitants in 2005 in areas with population decline whereas 9.3 per 10 000 residents in municipalities with positive growth. For physicians, the issue of isolation and earnings might account for recruitment difficulties. The number of physicians remained steady during the period 2002-2005 (see Figure 2.14).

Another concern raised by geographical variability is related to physicians' skills. According to the 2005 OECD *Economic Survey of Norway*, authorities are concerned that physicians in remote areas do not seem to sufficiently benefit from transfer of knowledge by being in continuous interaction with other physicians as it is the case in hospitals or in more populated areas. Individual

Table 2.9. **Average number of physicians per 10 000 inhabitants in 2005**

All municipalities	11.6
Municipalities with negative population growth	13.5
Municipalities with positive population growth	9.3
30 municipalities with highest negative population growth	13.1
30 municipalities with highest positive population growth	8.4

Source: Statistics Norway.

Figure 2.14. **Evolution of the number of physicians (all types) 2002-2005**

Source: Statistics Norway.

updating skills do not compensate for the lack of the “spillover” effect achieved where clusters of doctors are present. Apart from the initiative of the National Centre for Health Service Research of disseminating best practices, one may wonder whether a combination of e-learning and exchange of information between rural physicians would help to overcome this variability to some extent.

Hospitals

The Health Enterprise Act transferred hospital ownership from counties to central government in January 2002. Hospitals are operated as health enterprises that report to five (now four) geographically based “Regional Health Enterprises”. The 81 hospitals merged into 33 health trusts, separate legal

entities from central government. As stated in the bill put forward to Parliament the reform is based on targets seeking to:

- Increase treatment capacity and reduce waiting time for medical examination and treatment;
- Ensure that patients are given priority in keeping with established national guidelines;
- Provide effective specialist health services regardless of where they live;
- Ensure that hospitals are able to perform their research and teaching tasks satisfactorily;
- Enhance co-operation between specialist health care services and municipal health/care services.

It is difficult to evaluate cost containment. However, achieving this objective has been complicated by the fact that generalised wage increases have been witnessed over a two-year period since inception of the reform. The research programme established to evaluate the Hospital Reform of 2002 documents that the rate of activity has increased more than previously, which implies that access is probably better overall. There have been only small changes in the degree of centralisation or decentralisation of the services offered. This also applies to services where this would have been desirable for quality reasons (centralisation) or for reasons of access (decentralisation). Overall, there seem to have been few changes of substance in the distribution of functions between hospitals (Norwegian Research Council, 2005b).

On the other hand co-operation among different levels of the health sector seems to have increased since the hospital reform that might have encouraged new approaches to maintain quality health services in spite of budgetary constraints. The creation of small rural hospitals and health centres is certainly the best expression of these efforts to maintain quality health services in remote areas thanks to innovative decentralised approaches. This could also be an answer to the problem of recruiting rural physicians as such centres provide for more career opportunities (see Box 2.8) with longer term perspectives. Some of these centres are run on a purely municipal level but more often as a co-operative venture between two or more municipalities. In most cases there is some form of support from the hospital so that both primary and specialised health services are delivered in the same centre. Health policy is to encourage the establishment of such centres, trusting that local health authorities will choose the most efficient way to organise the delivery of health services according to local needs.

Box 2.8. Health Centre in Steigen

The coastal municipality of Steigen (Nordland) had 4 500 inhabitants in 1972 and the population declined to around 2 700 in 2006. During this period, around 15 medical students born in the area graduated from the university but never came back to practice there. Some of the main reasons for these departures, in spite of relatively generous levels of possible earnings, seem to be isolation and hardship. A rural doctor in this municipality needs to cover 145 miles from his office to the hospital and must be on call every third to second night.

Steigentunet, a new rural medical centre of about 6 000 m² was opened in Steigen in 2001. This new centre constituted an innovative response to lack of rural physicians and costly dispersion of medical facilities: it replaced three health centres and three nursing homes dispersed over a large area. The centre is equipped with public health services, an emergency unit, hospital beds, a delivery room and a nursing home. As part of a co-operative agreement with the University Hospital in Tromsø, specific specialised health services are also offered on a decentralised/ambulatory basis. The centre comprises equipment for video conferences and tele-education and also the social security office. Staff numbers 19 (including 5 administrative personnel, 3 GPs, 2 dentists), plus 14 appointments for nurses and 20 for enrolled nurses.

The centre opens the perspective for rural general practitioners of further professional support. However, its development requires, besides funding from the municipality, additional aid from the hospital in Bodø that supervises the labour ward. Midwives spend one week each year at the nearest hospital, which contributes to the labour ward NOK 600 000-700 000 yearly. A part of this contribution is used to maintain the small emergency room (also saving costs in ambulance transportation to Bodø). Capacity of the nursing home is however a recurring problem. The new centre has contained costs, reduced by 10% between 2000 and 2002.

Source: OECD, from information provided by the Municipality of Steigen.

Social services for the ageing

As for other basic public services, social services are provided in Norway by municipalities on the principle of subsidiarity. The variety of services is very wide (see Box 2.9) and financing is carried out through discretionary municipal allocations of block grants and fees paid by patients living in public facilities or receiving home care. The municipality has freedom in deciding the service level and the way service delivery is organised. Most municipalities provide all social services themselves. In some cases, they contract out the service with a private business or join efforts with another municipality. These two options remain

Box 2.9. Social services provided by municipalities in Norway

- Help and/or financial support because of disability, age or other factors (alcohol and drug abusers).
- Relief assistance for people and families with comprehensive needs for care.
- Support for people who need help for leisure and social activities.
- Sheltered accommodation with services.
- Salary for people who care for children or relatives with comprehensive needs for care.

Source: *helsetilsynet.no*.

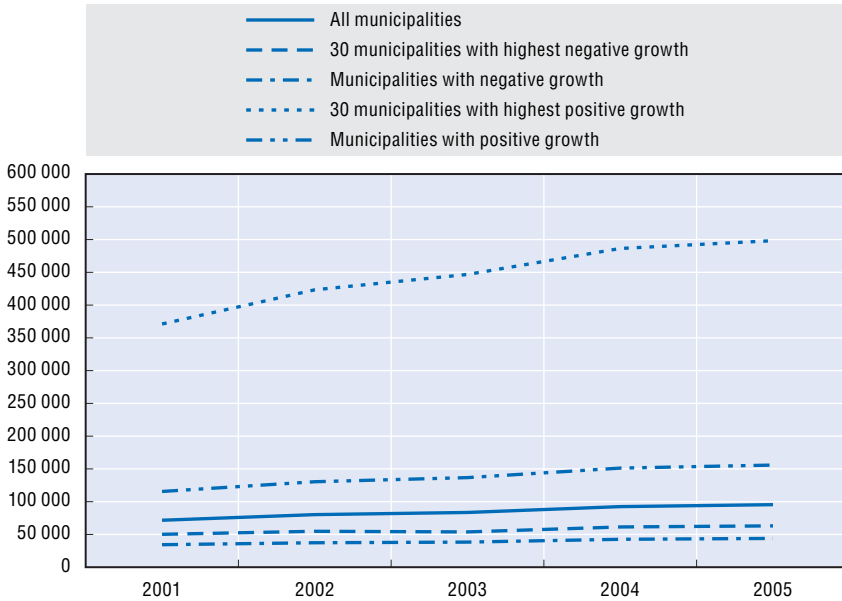
however limited in rural Norway because private sector social services are lesser developed than in urban areas, whereas great distances can constitute an obstacle to increased intermunicipal co-operation normally justified by economies of scale.

As the box above illustrates, most social services concern elderly people and because of ageing trends this is today a prime concern of municipalities. Efforts are made to keep elderly people at home as long as possible on the basis of freedom of choice but also because of the high cost of retirement homes and related services. This also implies increased efforts to organise in home services in a flexible fashion, with obvious recourse where possible to the private and/or voluntary sector. This goal, advisable both in social and financial terms, is actually a big challenge for many rural municipalities for lack of sufficient human resources within the voluntary or private sector, precisely because many young people tend to move progressively to urban areas.

The municipal health and care services have over the past 20 years undergone some major reforms that have affected both care for the elderly and user groups with various types of disabilities. According to White Paper No. 25 (2005-2006) “Long-term care – Future challenges”, the main challenges for these services are the increased number of new user groups that require specialised treatment, the increased number of elderly people, the prospects of needing more expertise in dementia and complex illnesses, the shortage of personnel and the need of including social and cultural care alongside health care. All these challenges have been translated into costs.

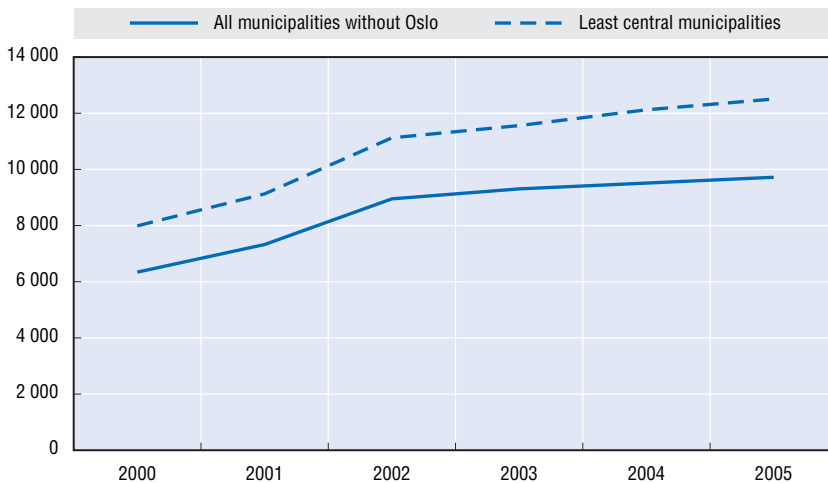
Care expenditure for the elderly is growing in all types of municipalities (see Figure 2.15) due to the evolution of wages for nursing and care (2001-2005). This overall trend however entails differences between types of settlements. When net operating expenditures per capita are considered for nursing and care services (see Figure 2.16), “least central” municipalities (those with difficult

Figure 2.15. **Average wages for nursing and care between 2001-2005 by type of municipality**



Source: Information provided by the Ministry of Local Government and Regional Development from Statistics Norway.

Figure 2.16. **Average net operating expenditures per capita, nursing care services in municipalities**



Source: Statistics Norway.

access to labour markets and small urban centres) have higher expenses than the average of all municipalities (without Oslo). An added difficulty (see Table 2.10) stems from the fact that staff per 10 000 inhabitants is higher in areas with population decline in comparison with the average of municipalities with positive population growth.

Table 2.10. **Staff with health-social education for nursing care per 10 000 inhabitants in 2005**

	Per 10 000 inhabitants
All municipalities	203.5
Municipalities with negative growth	239.0
Municipalities with positive growth	163.0
30 municipalities with highest negative growth	254.1
30 municipalities with highest positive growth	137.1

Source: Statistics Norway.

White Paper No. 25 suggests some strategies concerning: quality development, research and planning, capacity and skills upgrading (recruiting new 10 000 man-years by end of 2009, increasing the percentage of employees with professional qualification), collaboration with other national agencies and municipalities, medical follow-up, active care, partnership with families and the local community, strengthened legal protection. These strategies also focus on a weakness identified in other sectors: the need for more “joined up” government. The challenge is not only to improve co-operation between national agencies but also that municipalities benefit from increased collaboration, especially in sparsely populated areas where “joined up” efforts should entail efficiency gains. The policy document recognises that voluntary organisations, self-help nets, the family and private actors could support the strategy. Alternatives could be explored in a fashion similar to the one presented below and now developed in different rural areas in France (see Box 2.10).

2.4.4. Innovative approaches

As traditional service delivery is no longer sufficient to overcome the challenges posed to municipal authorities in areas of population decline, new strategies are devised to maintain equal living standards countrywide without increasing costs. Different types of measures can be implemented within the public governance and central place theory framework, in order to foster initiatives that allow a more co-ordinated approach from various service providers. These measures include in particular: merging local authorities, building up intermunicipal co-operation, fostering partnerships among different actors but also improving provider efficiency or enhancing user capabilities.

Box 2.10. **Improving the quality of life of the elderly in Saône-et-Loire (France)**

The county council of Saône-et-Loire (Burgundy) established a partnership with the company “Family Villas” and the French association of host families for the implementation of seven sheltered residences for elderly and disabled people. In order to accommodate the needs of both the people who are “in care” and of their families (can be the direct family but more often “chosen” family), specially designed housing was planned. On the ground floor, people in care have individual rooms and a communal dining room/kitchen. On the upper level, apartments are reserved for the host family. The designated care person has to meet specific professional requirements that are validated by the county council. The person who lives with a “host family” has specific rights, paying for the services received. The small size of the houses and the moderate investment costs make this form of co-housing attractive for rural municipalities, allowing elderly/disabled people to continue to live in their village. The “Villa Family” creates jobs and attracts young families. Ten “Villa Families” operate in France, the oldest since 15 years.

Source: *governanceinternational.org*

Building up on the public governance framework, problems of service delivery in rural areas can be approached by combining reduction of distances and improvement of the service experience considered a joint responsibility of consumers and service providers (Aasbrenn, 2006). Service providers can increase income by diversification, promotion and introduction of mobile services. Costs can be reduced for both private and public providers by introducing shorter opening time or by replacing staff by machines, like substituting a bank by a cash dispenser with enhanced functions. Finally, public providers can enhance their service delivery in these areas through mergers (reducing costs while maintaining services) and intermunicipal co-operation and partnerships. Consumers adapt to the distance problem through different measures ranging from multipurpose individual actions (using several services each time the user visits a regional centre for a single purpose) or network-based help: different persons can take care of businesses for neighbours when trips are planned to regional centres.

Innovation in service delivery in rural areas can thus involve both public and private actors, service providers and consumers. New venues for co-operation and organisation of services help to surmount the barriers of distance and low density while (ICTs) offer new perspectives. Combined with organisational and managerial innovation, adequate deployment of infrastructure and services in a shared mode can help to overcome the

different hurdles facing rural areas and particularly those with declining population. Tele-education and tele-medicine are beginning to prove their efficiency in many countries and Norway is no exception. Integration of different services in a networked fashion can safeguard the human factor (face to face or phone contact), while making best use of online services. This combined approach has been adopted by Services Canada: thanks to a 400-point network, 93% of Canadians can access federal government services within 50 kilometres from their home in 2006 (Canada Economic Development, 2007).

Multi-purpose approaches

Many private service providers, in particular retail and grocery shops are disappearing from remote and sparsely populated areas. The relevance of these providers is manifold: on one hand, they deliver basic services to the population; on the other, they represent places where the community gathers and enjoys social life. Recognising this multi-purpose role, that often overlaps into public service functions such as that of ensuring basic postal services (collection of mail and parcels), many countries, including Norway, have devised programmes aiming to support small rural grocery shops taking responsibility for other basic services. In Norway, this programme, called Merkur, financed by the Ministry of Local Government and Regional Development received until recently 7 million NOK per year (in 2007, NOK 9 million). Its prime focus is retailers in areas with population decline and long distances to other retail opportunities. Many of these retailers are in delicate financial situations for lack of regular or sufficient cash flow; often on the verge of closing down.

The programme has the following goals in the periphery: a) To facilitate the maintenance of good quality service provision; b) To ensure access to a grocery store near homes; c) To increase the awareness of the population and politicians of the importance of the grocery store in the neighbourhood. It offers competence to retailers through nine counsellors located all over the country and these fulfil a range of services aiming to support business development. Advice can be provided on how to obtain better bulk prices when ordering products, how to choose products, devise new product or service offerings. It extends to co-operation with existing private and public organisations like postal services or betting (Norsk Tipping) and tourist information services. Often, MERKUR counsellors help the retailers by mobilising the community to support the local shop by sufficient purchases to try and counterbalance the attraction exerted by shopping centres in nearby towns and cities.

So far 700 retailers from around 550 local areas have applied for the programme. Not all retailers in areas with population decline apply for the grant. Due to their strategic location within a community and in particular a central position offering the possibility to easily cater to tourists, some

retailers are able to make enough profit without any further help. This is the case of Rendalen, where in spite of the fact that many small shops in the territory have disappeared over years (see map above, Chapter 1, Section 1.4.3), there is no application for the MERKUR programme. The remaining retailers, now conveniently regrouped in a “business village” comprising a hotel, with the support of the municipality itself, are able to develop their activity without needing support from a programme like Merkur.

Norsk Tipping has entered the programme although it usually does not grant to a retailer a position for the betting business on any special district policy consideration, as the agency is only guided by considerations linked to its business development. Turnover from gaming must average at least NOK 8 000 per week (Norsk Tipping, 2005) so that a retailer can be authorised. Of the new 107 Norsk Tipping retailers in 2005, 12 were established in co-operation with MERKUR. The philosophy of the MERKUR programme has also raised the awareness of big private retail enterprises that take the goals of the programme as a part of their social responsibility. For instance, Norgesgruppe helps the Norwegian State Wine and Spirits Monopoly (Vinmonopolet) in regions without Vinmonopolet shops (report Norgesgruppe, 2004).

It seems however that there is room for more integrating strategies fostered by central government. The involvement of other national agencies and private enterprises as well as commitment from the side of the municipality could be explored in a more systematic way. While counselling retailers is a good strategy that relies in making their products more attractive and somehow more competitive instead of subsidising their business for being in remote areas, joint initiatives with other service providers could bring new insights in this type of solution.

In other countries, somewhat different approaches have been taken. In Germany, the “service supermarket” was developed in the small community of Bismark (Saxony) in the nineties. The concept of “service supermarket” (Lenk and Klee-Kruse, 2000) implies that in the same building (some times provided by the municipality) several service providers (public and private) join resources in order to provide services to a scarce population. The project in Bismark shows how public utilities (gas, electricity and telephone), grocery shop, post office, the employment office and other services can be dispatched in the same building. The experience requires considerable co-ordination efforts among the different parties, as the trained staff of the public services will act in many occasions on behalf of different providers. Furthermore, the introduction of ICTs helps the specially trained staff of the office in the event that users require more sophisticated counselling, on social issues for instance. In this case, the user can link up at distance in guided fashion with a civil servant from another administration. The “service supermarket” resembles

one-stop shops of public services. The novelty of the “service supermarket” lies in the fact that public services of different levels of government and also private service providers work together.

Electronic service delivery

ICTs can provide at least a partial answer to the problems that municipalities with population decline face regarding service delivery. To benefit from the full potential of ICTs, several conditions have to be met regarding infrastructure (broadband connection), usage by different age groups, the organisational challenges that technology poses on different service providers and the capacity to join efforts between different sectors. ICT has potential benefits for services in different sectors. This subsection focuses on general municipal services, on health (telemedicine) and on education (tele-education).

In 2006, broadband access in Norway covered 95% of Norwegian households. The figure appears impressive as compared to achievements in many countries, however full broadband access encounters limits in remote areas. Further, elderly people, overrepresented in remote areas, have the lowest access rate. Moreover, wide broadband coverage hides the fact that connections range from 1 Mb to 40 Mb and 170 Mb with few cases of 1 Gb. As demands on services will grow or some services have special bandwidth needs, room for improvement seems to remain large, particularly in the most sparsely areas experiencing population loss.

Broadband connections are implemented in a market where different technology providers (more than 130) and different major public customers like health, education and local authorities as well as national agencies interplay. The coexistence of many different network providers complicates interoperability (OECD, 2004c). Other big users, like hospitals, have put in place different security protocols than local authorities, which excludes the possibility of integrating doctors in the health and the municipal network at the same time. Initiatives to overcome fragmentation should not focus only on the technological side of the problem but also on the organisational aspects and on the willingness to share resources. According to the SINTEF STEP report on Høykom, ICT investments in schools are not shared with other municipal services or with the business community. As sharing could help bring down costs, the issue here relates to problems of horizontal co-ordination.

Norwegian Broadband policy was established in 1998 in a report issued to Parliament (St.meld.nr.38, 1997-1998). The programme, called Høykom was designed to motivate public agencies to use broadband applications and services and to focus specially on remote areas. The budget allocation of the programme from the Department of Trade and Industry amounted to EUR 8.5 million during the first period (1999-2001) and EUR 21 million for the

second (2002-2004), with an additional funding of EUR 11 million from the Ministry of Education and Research for the second period. This amount of money aimed at providing primary and secondary schools with broadband Internet connections. The Research Council of Norway oversees the programme. The more than 400 projects co-funded by Høykom are related to health, education and municipal services. Typology of projects according to main objectives is as follows (Lanestedt and Mogen, 2005):

- Conversion from traditional telephone services to Voice over Internet Protocol (VoIP);
- Initiation, consolidation and fostering of intermunicipal electronic collaboration;
- Establishment of digital learning exchange among institutions;
- Delivering public services online;
- Automating and speeding up processes in municipal services and health.

Following OECD recommendations of not distorting markets through public investment in broadband based services, Høykom did not fund broadband infrastructure until 2002, when school infrastructure projects started to be financed. An independent evaluation report by SINTEF STEP on Høykom criticised government policy of following strictly neo-classical equilibrium models applied to the telecommunication sector. Different arguments can be produced against neo-classical dogma. The SINTEF STEP report on Høykom maintained that the theory does not deal with real world competition as the dynamic forces leading to equilibrium are not taken into account. It further conveys the idea that innovation, economic growth, change and social cohesion (*i.e.*, avoiding the digital divide, for instance) are catalysed through public sector investment in infrastructure, especially when market forces do not find it profitable in certain areas. Besides, if the avowed goal of the government is to grant equivalent welfare services to citizens regardless of their place of residence, broadband could be considered as a part of the overall policy. There is a contradiction between welfare services being subsidised in remote areas while restrictions are imposed for broadband infrastructure, which permits to share resources in those services.

Norwegian local authorities have had to accept local monopolies of broadband operators with the disadvantages of vertical integration, whereas competition is considered beneficial in terms of providing a cost-effective choice of services. In this context, broadband deployment in Norway has found pragmatic responses to such limitations. The absence of Høykom in infrastructure projects has been counterbalanced by local public investment through semi-public or public hydroelectric power station companies that have built up access for public and private customers. In about 50 of the

130 companies, municipalities are participating as owners (Norsk Telecom, 2004, quoted in Skogseid, 2005). On the other hand, partnerships can permit to develop and operate local broadband infrastructure, as the example of a rural region in “Sogn og Fjordane” shows (see Box 2.11). These local initiatives offset the absence of national operators willing to invest and the restrictions imposed on Høykom to finance infrastructure. However, users have growing quality demands on ICT technologies that imply communication between providers and keeping up with investment by introducing new technologies (Hansteen, 2005). Standardisation of processes and protocols thus becomes very important.

Box 2.11. Partnership for broadband projects in “Sogn og Fjordane”

Firdanett and Kapasitetslaget projects deployed in “Sogn and Fjordane” respond to the needs of local business communities and the local public sector. In Firdanett the demand for high-speed Internet access increased but no national provider was willing to make investments in the area. In Kapasitetslaget the main stakeholders of the project are the regional public sector, the businesses and the college, while in Firdanett the local public sector and different enterprises funded the initiative. Local specificities were taken into account because infrastructure was built on the installed-base, rather than copying top-down approaches used when developing traditional telecom infrastructure. Potential first adopters and local organisations, with existing infrastructure to build upon, can thus take the responsibility of being service providers to facilitate broadband access in an area.

Source: Skogseid, Ingjerd (2005), *Market Driven Development of Broadband Infrastructure in Rural Areas*, Western Norway Research Institute, IRIS.

In spite of the above mentioned limitations that reduce its potential impact, the Høykom programme seems to have been rather successful in its endeavours. According to the SINTEF STEP report, the positive results of the programme allowed its extension several times. Approximately 90% of the projects have gone to schools, health, social services and other municipal services. Around 70% of the projects have offered new or improved services to different customers (pupils, teachers, patients, doctors, business and citizens in general). In nearly half of the cases, the project has led to a kind of formal or informal partnership. Finally, the quality of the services has improved in half of the cases while efficiency gains have been obtained in around a quarter of the projects. As regards the avowed aim of improving services in rural areas, around half of the funding has been transferred to institutions in the periphery, although the benefits in terms of results have not been documented.

Tele-education

The initiative to improve broadband infrastructure for the benefit of education is channelled by the Ministry of Education through “Høykom-School” since 2002. Unlike other Høykom projects, infrastructure is here subsidised in order to correct market failures for certain niches and territories. The SINTEF STEP report on Høykom shows that 363 schools scaled up their connections thanks to Høykom support. Each project received about EUR 16 000 average in order to start up the project, (see Table 2.11). Without the funding, broadband would have come much more slowly. However, bigger benefits could be drawn from the existence of state of the art ICT infrastructure in schools if connections were used by other services or by the local business community or if tele-education projects were developed more systematically (see below). This would imply co-ordination and partnerships with other stakeholders that could help to finance additional projects for pupils but also adults through distance learning.

Table 2.11. **Number of projects and investment in “Høykom-School” programme**

Year	Høykom	“Høykom School”	“Total (mill NOK)”	“Total (mill euro)”
1999	12.0		12.0	1.5
2000	18.0		18.0	2.3
2001	38.5		38.5	4.8
2002	53.5	48.0	101.5	12.7
2003	51.5	23.0	74.5	9.3
2004	66.5	16.0	82.5	10.3
2005	50.0	0.0	50.0	6.3
Total	290	87	377	47.2

Source: Hansteen, Kjell (2005), *Norwegian and Swedish Broadband Initiatives (1999-2005)*, HØYKOM report No. 505, Ministry of Modernisation, Norway.

Tele-education is about transporting knowledge and expertise with the help of ICT and creating interactive learning environments in the process. E-learning saves expenses in travelling and living costs of being away from home. It also allows the share between family, work and life-long learning for the adult population. The Internet era has facilitated the access to higher education for those living in remote and rural areas. As for primary and secondary education in remote areas, e-learning is now also developing and is often the only solution left to continue offering sufficient choice in curricula or even maintaining a school in a given location. If rural schools want to provide a wide choice to pupils, they need to co-operate and share resources with other schools through videoconferencing. The advantages offered by

such solutions are eloquently illustrated by the example of the upper secondary school located in the municipality of Stor-Elvdal in Hedmark that the OECD team visited (see Box 2.12).

The major relevant feature of the project is that it was locally conceived and received initial start-up financing from the Ministry of Education. After several years of such support, the project is now self-reliant and is pursued without any additional state funding. The technical implications of the project as well as its pedagogical aspects seem to be the result of the mobilisation of local resources more than reliance on advice from the national level or on networking with similar experiences elsewhere in the country. It would certainly be useful to provide more systematic support to this type of initiative and to ensure dissemination of results while monitoring the process. Organised networking could easily bring its benefits to other rural areas where similar challenges exist. Such efforts could well be co-ordinated at the national level precisely through the Internet. The logic of such an engagement would also be to bring added value to the efforts deployed through Hoykom to ensure that schools are equipped with adequate broadband infrastructure.

Telemedicine

According to the EU Commission's programme "Advanced Informatics in Medicine", 1991 (see Blomberg, *et al.*, 1999), telemedicine can be defined as "rapid access to shared and remote medical expertise by means of telecommunications and information technologies, no matter where the patient or relevant information is located". Telemedicine in Norway is part of a national strategy to increase co-operation and co-ordination between hospitals and general medical services, to increase the skills of health personnel through e-learning and to provide better specialised services in sparsely populated areas. Up to now, telemedicine in Norway has focused on remote consultations and diagnoses through interactive sound and pictures and simultaneous communications between the patient, the general practitioner and the specialist. A second area of telemedicine use in Norway is the electronic transfer of patient information by the GP to the specialist. In this type of consultation, the patient might not be present when different information transactions are fulfilled. The first type of interaction demands higher resources and co-ordination costs between the different parties.

In the Norwegian context, factors that facilitate or foster the use of telemedicine are: the stated goal of delivering equal health care to all citizens regardless of place of residence, potential efficiency gains through the use of ICT and the principle whereby health care should be provided at the level closest to the patient. According to certain authors (Gammon, 1999), there are several factors that restrain or constitute a barrier for reaping the full benefits of

Box 2.12. An example of tele-education in an upper secondary school

The upper secondary school of Stor-Elvdal (community of Koppang) in Hedmark (130 pupils) serves several neighbouring municipalities, in particular Rendalen. Stor-Elvdal has a declining population of close to 2 800 inhabitants (density of 1.3 per km²) and Rendalen, also declining, with 2 045 inhabitants today (and only 0.64 per km²) is the largest municipality in South Norway (3 178 km²). Staffing problems made it difficult to ensure teaching of all subjects because of school schedules and availability of teachers. Involving teaching resources from other schools in the area through videoconferencing was the only solution permitting to offer a varied curriculum to pupils attending the school in Koppang. This was done through an agreement with the school located in the municipality of Trysil.

Regular courses are offered in one school, where the teacher and pupils are present and they are also attended by pupils in the other school from a classroom equipped with videoconferencing. The virtual classroom is serviced by two screens, microphones, loudspeakers, computer and the telecommunication system that connects with the teacher and the other pupils. One screen allows seeing the pupils and the teacher at the other end. Another monitor shows the blackboard with the writing or slides of the teacher. The communication system allows interactive sessions in which teacher questions students at both ends.

The experience started as a national project with government support of NOK 250 000 per year during four years. After initial support, the schools had to self-finance the experience. This method was initially used for four subjects (chemistry, mathematics, physics and social studies) with the teacher being either at one end or the other. In 2006-07, it has nonetheless been used only for chemistry, which probably does not offset the high costs incurred.

Without this project, chemistry could not have been offered to pupils in Koppang. The main reason of implementing tele-education is to offer courses which are not financially sustainable by one school or the competence for that subject is absent in a specific school. According to this experience, students obtain similar results in traditional teaching and in this innovative system. Both parents and pupils seem to be satisfied because the school can still meet demand but the experience is not yet embraced by all teachers, explaining subject matters discontinued.

Source: OECD with information provided by the school administration of Koppang and by Statistics Norway.

telemedicine. Those factors seem to be enduring, as they are pointed out in 1999 and in 2006 for the same issues: relationship between health authorities in different government levels, limited involvement of GPs in telemedicine and uneven distribution of savings and investment burdens among stakeholders.

The reasons explaining the limited involvement of GPs in telemedicine are diverse. Lack of funding at the municipal level appears to be a major hurdle. Uncertainty related to questions of responsibility when using telemedicine are another. Some questions remain unanswered in the present system: is a doctor accountable for the treatment of a patient he/she does not see? GPs seem to still need more practice with the technology because there are relatively small numbers of patients eligible for telemedicine. Perhaps incentives could be tied to the use of telemedicine in a more intensive way.

While the application of telemedicine nationwide still needs further efforts from all sides, some individual documented examples show that economic benefits can be materialised. The Alta District Medical Centre (a Høykom project) reports yearly benefits of NOK 12 million due mainly to lower transportation costs (Lanestedt and Mogen, 2005). A hospital in Telemark reports NOK 50 000 per week in reduced taxi expenses related to the transportation of X-ray pictures. Another 2004 report states that the Central Norway Regional Health Authority has saved around NOK 70 million per year as a result of telecommunicating X-ray images. As the patient no longer needs to travel when telemedicine is applied, significant travel cost reductions appear. An indirect positive benefit can also be mentioned: reduced travel to medical centres results in more time spent in the workplace and less absenteeism. Alta medical centre also quotes the potential financial benefit of treating patients for longer periods at home before sending them to a hospital or institution.

Contrary to other fields like education or e-government, the Høykom programme has been less focused on health applications. The Ministry of Health and Care Services, as owner of regional hospitals, concentrates resources on the sector and has invested considerably in scaling up bandwidth for transmission of electronically relevant health documents. If Høykom is to play an increased role in different parts of the health community, new funding would be required. This could help in supporting initiatives of GPs, as their upgrading abilities depend on the usually limited municipality purse (Hoykom, 2004).

The results of telemedicine can be summed up in the following way (Breivik, *et al.*, 2007). Economic benefits depend mainly on the volume of service use. In many instances, telemedicine practitioners do not even report these benefits. It seems that trust in the system still needs reinforcing. A number of studies report qualitative benefits but without clear measurement of

improvements. The current appraisal of benefits is limited because only pilot programmes and small-scale services have been evaluated up to now. Apart from analysing cost-effectiveness, the systematic analysis of patient satisfaction and identified benefits for professionals could usefully be pursued. Better integration between the legal, technological and organisational systems is also required if telemedicine is to fully develop its potential. Therefore, economic and qualitative indicators relevant in the Norwegian context could usefully be defined in order to measure the benefits of telemedicine.

2.4.5. Summing up

The broad picture

Municipalities with declining population are generally small but of variable dimensions so the phenomenon is not linked to any specific factor relating to size. They are characterised by overrepresentation of the elderly and under-representation of people of school and working age. Progressive disappearance of service points (schools, post offices, grocery shops, petrol stations) is a common feature leading to increasing distances between place of residence and location of public and private service provision. Decrease of the income tax base and block grants linked to headcounts and correlative increase of equalisation grants are a direct consequence of the negative growth of working and school age population. Costs of public and private services increase not only because of the declining numbers of inhabitants with maintenance of similar fixed costs for many services but also as a consequence of an increasing elderly population with intense needs in personal care. Recruitment of skilled medical personnel in remote declining areas is both costly for the municipality and difficult, as rural areas remain less attractive than urban areas with more patients.

Evaluation

The assessment in international comparative terms of service quality in these municipalities judging by the accomplishment of national standards and by site visits is highly positive. Rural communities are able to have well kept home care residences, health centres, school facilities and municipal service points for the population living in these areas. Besides, schools and the municipality provide cultural amenities year round that are only provided in similar areas of other countries in the summer period. However, these services are costly and in the longer run, under increased ageing pressures, present trends are unlikely to change. The current model of transfers to municipalities and the national control of inputs and activities standards seems to work properly. Nonetheless, can more systematic use of benchmarking to better analyse the impact of different cost factors such as higher than proportional salaries or higher staffing ratios, help in achieving higher cost-efficiency?

Perspectives

Concerning shortage of teachers in schools, recent measures to enhance teaching careers and to attract teachers to rural areas will only produce effects slowly and they will not entirely solve the problem of maintaining a sufficient number of schools in remote areas. Could more systematic use of video-conferencing and tele-education contribute to solving part of this dilemma?

In the health sector, how could recruitment bottlenecks, now dealt with at the municipal level, be solved, avoiding competition between municipalities on salaries and advantages? Could plans to attract young medical students and nurses at the beginning of their career be devised? Could co-operation between hospitals and rural health centres be stepped up by development of tele-health?

Concerning the elderly, could new approaches for retirement homes, such as the one indicated for rural France, based on family type approaches, be considered in Norway? Service delivery to elderly and handicapped people could thus be shared between the private and the public sector. In sheltered residences for elderly and disabled people, “families” living upstairs and elderly living downstairs could be of inspiration for reducing public costs of elderly care and using care as an economic growth factor that creates part-time jobs.

In the area of rural retail businesses, with reference to the concept of multi-service supermarkets, could private entrepreneurs be provided with facilities for retail in selected rural areas, in particular in the outlying zones of municipalities where shops have closed completely, obliging people to travel great distances for certain services? In this case, to facilitate business and develop synergies, additional public services (postal) and quasi-private services could also be provided (wine and spirits, betting), by coverage of certain additional costs.

Notes

1. For more details, see Edvardsen (2004) and Foss and Selstad (1997).
2. The SND (the Norwegian Industrial and Regional Development Fund) was formed from a merger of the Regional Development Fund (DU), the Industrial Fund and the Fund for Small Enterprises.
3. This section is based on research undertaken by the European Policies Research Centre at the University of Strathclyde, Scotland, for the EoRPA Consortium.
4. St.meld.nr.25 (2004-2005), *Om regionalpolitikken*. The title of the English summary of the White Paper underlines the policy shifts involved: Ministry of Local Government and Regional Development (2005), *A New Regional Policy – For Different Regions: Globalisation Changes the Conditions for Regional Growth*, Oslo.

5. Districts are sparsely populated, remote areas which are traditionally targeted by regional aid but are not the same as rural areas since they include urban centres in the North (Tromsø and Bodø). Extra focus on districts is reflected in the Norwegian title of the 2006 White Paper, whereas the title of the 2005 White Paper did not mention districts.
6. The decrease in regional development funding (under the 13.50 budget programme) in 2007 reflects the reintroduction of the social security concession; as a result, compensation for loss of this concession has been reduced. If account is taken of this, the budget increased by NOK 153.5 million (10%) in 2007. The local government funding in the table relates to support via the general purpose grant scheme; specifically earmarked support for counties and municipalities is excluded.
7. Further information on such initiatives in the Nordic countries is available in Nordic Working Group on Cities and Regions (2006). For policy information covering the EU and Norway see Yuill and Vironen (2006).
8. A co-operation project extending to five cities, implemented between 1993 and 2000.
9. Report No. 24 to the Storting (2003-2004), National Transport Plan 2006–2015, 12 March 2004.
10. Tax revenue from licenses for fish farming could however serve municipal budgets but the product of these fees is perceived by the Ministry of Fisheries and Coastal Affairs.
11. For an overview of the historical development of the regional aid guidelines see Wishlade (2003). The guidelines themselves can be found at *Guidelines on National Regional Aid for 2007-13*, OJEU C54, 4 March 2006, pp. 13-44.
12. *Guidelines on National Regional Aid for 2007-13*, OJEU C54, 4 March 2006, paragraph 6.
13. This information in this and the following paragraph is drawn from Ministry of Finance (2006), *State Aid – Regionally Differentiated Social Security Contributions*, submission to the ESA, 12 June. See also Section 1.4 for a discussion of the periphery index.
14. With a range of academic studies quoted in support of this conclusion, see EFTA Surveillance Authority Decision of 19 July 2006 on the notified scheme concerning regionally differentiated social security contributions (Norway) (Decision No. 228/06/COL).
15. Under State Aid rules, *de minimis* support relates to small amounts of state aid which do not require prior notification. *De minimis* support can be paid to an individual firm up to EUR 200 000 over a three-year period (up to EUR 100 000 up to the end of 2006) without prior notification.
16. See EFTA Surveillance Authority Decision of 19 July 2006 on the notified scheme concerning regionally differentiated social security contributions (Norway) (Decision No. 228/06/COL), paragraph 3.10.
17. Dyrstad (1992) estimated the incidence effect of a regional change in social security tax to be 30% in the long run, while Johansen and Klette (1997) estimated the incidence effect of a regional change to be between 60 and 100%. Johansen (2001) found an incidence effect of 20% (not statistically significant). All of the studies were carried out in the manufacturing sector.
18. NUTS III in Norway is the county level.

19. This compares with a 2000-06 ceiling of 25.8%; Norway was alone in the EEA in having an increased population quota for 2007-13. This has resulted in 24 new municipalities being included in the 2007-13 map.
20. Ministry of Local Government and Regional Development figures.
21. St.meld.nr.8 (2003-2004), *Rich Diversity in the North: About the Action Zone in Finnmark and North Troms*. In addition to Finnmark, the Action Zone consists of the municipalities of Karlsøy, Lyngen, Storfjord, Kåfjord, Skjervøy, Nordreisa and Kvaenangen in North Troms.
22. The Integrated Management Plan for the Barents Sea and the Ocean Areas off the Lofoten Islands – see Office of the Prime Minister, *Integrated Management Plan Ready*, Press release No. 45-06, 31 March 2006.
23. There remain nonetheless a large number of research institutes of different sizes in Norway, working for both business and the public sector. They are responsible for about one-quarter of all Norwegian R&D.
24. An example of a VS 2010 project: a graphics industry sector project co-ordinated by Oslo Teknopol (see further) with applications in tourism.
25. The Oslo Alliance regroups 56 municipalities, including the municipality of Oslo and two counties (Akershus and Ostfold) since 2004.
26. *The Economist Intelligence Unit's Worldwide Cost of Living Survey for 2007* ranks Oslo as the most expensive city, followed by London, Tokyo, Moscow and New York.
27. Trondheim played a major part in the history of the country since the Viking era and Norwegian kings are still crowned in Trondheim cathedral.
28. Total cost: EUR 1 234 968.
29. The university opened in 1972.
30. See Section 3.4.2 on intercounty co-operation.
31. For instance reduction in the number of pupils attending a school meaning reduced grant levels that do not take fixed costs into consideration.
32. Mandatory practitioners are medical graduates who are serving in general practice in order to be licensed.

Chapter 3

Governance Issues

3.1. Regional policy challenges

Geography and settlement patterns strongly constitute inherent factors of regional policy in most countries. This is particularly the case of Norway, with low population densities, especially in the northern part of the country, as well as a broken, mountainous landscape that renders communication problematic and reduces accessibility to services, economic activities and jobs in large parts of the country. An illustration of this is that 40% of labour market regions consist of only one municipality, as indicated in Chapter 1. Regional policy in Norway thus traditionally seeks to address the issues stemming from dispersion of population and difficulties in access, with most of these areas characterised by lower than average economic performances and demographic stagnation or loss. The challenge of Norwegian regional policy is to compensate for these natural handicaps without stifling chances of ensuring on the longer term economic sustainability based more on endogenous growth than on handouts from the national level.

The goal of Norwegian regional policy is to facilitate people to live where they want to live and to keep remote areas populated (Ministry of Local Government and Regional Development, 2005a). The challenge is thus to provide means and instruments by which regions can retain and attract people and firms. Important elements in this are stimulating regional economic growth, generating employment and maintaining public services. In some cases this can deliberately lead to supplying a level of quality higher than already stringent national standards, as discussed in Chapter 2, insofar as this is considered as a favourable element for maintaining the population in certain remote areas. Governance has a strong impact on the extent to which these different goals can be reached. This chapter focuses on its institutional framework, co-ordination issues, citizen participation and future developments.

3.2. The institutional framework

Norway is a unitary country. The administration is organised along a classic three tier model: the central government, led by a Prime Minister, reflecting the parliamentary majority (often a coalition) and two subnational levels of government: the 19 county councils and the 431 municipalities. Parliament is responsible for the overall distribution of competencies and county and municipal organisation (Local Government Acts of 1992 and 2005,

see further), with the central government retaining strong regulatory and financial powers over local government. The two subnational levels of government do not constitute a hierarchical organisation, but function as separate subnational organisations with different geographical scope and competencies in economic development and for the delivery of public services.

Governance of regional development in Norway involves a large set of actors, each responsible for regional development issues in different areas and at different levels. At the central level, several ministries and a few key agencies are the main actors of regional development. The Ministry of Local Government and Regional Development (see Box 3.1) assumes the leading role, but others such as the Ministries of Health, Education and Culture, Industry and Trade, Agriculture and Food, Fisheries and Coastal Affairs or Transportation and Communications are also closely involved. All ministries¹ are fairly small and staffed by around 4 200 people altogether. At the regional level, the county governors' office and the regional bodies of different agencies such as Innovation Norway or RCN represent the central government whereas the county Councils are self-elected.

Box 3.1. The Ministry of Local Government and Regional Development

When created in 1948, the Ministry of Local Government and Regional Development was responsible for labour market issues as well as local government administration and finance. Responsibilities have since grown to include a wide range of fields such as housing policy, regional and district development and local government supervision. The Ministry employs circa 190 people in four departments, the Department of Local Government, the Department of Planning and Administrative Affairs, the Housing and Building Department and the Regional Development Department.

The budget for regional policy amounts to NOK 1.4 billion in 2005, around 0.2 % of national public expenditure. If regional policy were to be defined in a broader sense, other elements of the budget of the Ministry of Local Government and Regional Development would qualify. Such is the case of the remote regions grant and the North Norway grant that form part of the equalisation scheme (see below) lying within the budget of the Ministry of Local Government and Regional Development. Not included in these figures is the compensation for the abolishment of the regionally differentiated social security tax, nor the North Norway and regional grants. In reality, the budgets allocated to regional development efforts are thus far higher than the figure mentioned above.

Source: From Ministry of Local Government and Regional Development information.

Municipalities and county councils are the main providers of public services in the country, alongside the recently created five regional health enterprises that are offshoots of the Ministry of Health. Oslo is both a municipality and a county. In Norway, the general policy for regional and local development and provision of public services is the subsidiarity principle, with responsibilities placed at the lowest effective level and local and regional elected bodies being in charge of matters requiring local and regional political discretion. The task and responsibility of the central government is to set rules and regulations in areas where a national uniform provision of services is expected throughout the country. It ensures that municipalities and counties fulfil the standards or requirements set by the central government, which in certain cases may require compensation for additional costs or because of a reduced tax base. This is the case not only for policy implementation but also for policy formulation. The county governor plays here the leading co-ordination role, alongside other central government regional offices.

National ministries are responsible for overseeing the traditional tasks devolved to that level of government in all countries (major infrastructure; judiciary, police, defence; foreign policy). In other policy areas, the division of functions between the various levels of government is decided by the Parliament. The Local Government Act of September 1992, last amended in 2005 defines most of the tasks performed by counties and municipalities. Sharing of responsibilities occurs mostly in the area of public services. In particular, specialised health and social services, higher education, main infrastructure and regional policy are a national responsibility. Counties are responsible for upper secondary education, regional development, regional infrastructure and culture. Municipalities carry responsibilities for primary and lower secondary education, primary health care, childcare and care for the elderly.

3.2.1. Central government

The Department of Regional Development in the Ministry of Local Government and Regional Development has no own subsidiary bodies or regional representation. The responsibility for the department's budget means relies instead on agencies such as Innovation Norway, SIVA and RCN and county and municipal governments. The Ministry of Local Government and Regional Development draws the main policy guidelines and allocates funding to the agencies responsible for decisions relating to specific projects and overseeing their implementation. The agencies follow policy directives drawn up by the central government. Various regulations and financial mechanisms, decisions on the composition of boards and yearly meetings with the Ministry of Local Government and Regional Development and other ministries channelling funds ensure coherence.

As an exception to further decentralisation trends, the 2002 hospital reform includes transfer of ownership and responsibility of hospitals from the 19 counties to the Ministry of Health and Care Services. With the reform, five (now four) geographically based regional health enterprises, reporting to the Ministry, were created. The regional health enterprises, operating through 33 local health trusts, are responsible for organising specialised health care in their respective regions. The regional health enterprises do not have own revenue, but act on behalf of and are funded by the central government through both fixed and activity-based grants. Executive board members of the regional health enterprises are appointed by the Ministry of Health and Care Services. Expenditure data however show that spending increases have not yet been curbed. Even though accountability has in principle increased, according to the *OECD Economic Survey of Norway*, strong co-ordination is required, as municipalities are responsible for general medical services (OECD, 2005c) and in many remote areas maintain health centres that in fact play the role of small local hospitals.

Another important reform with territorial scope relates to the merger mid-2006 of the National Employment Service (Aetat), the National Insurance Organisation and the Social Welfare System. Through the former two government services, a total of approximately NOK 265 billion, or 43% of government expenditure, is transferred every year. Fundamental change was considered to be necessary to ensure coherence and in particular to help counteract the increasing tendency towards early retirement through generous sick leave and disability schemes (see Chapter 1). As of 1 July 2006, the agencies were merged into a single Labour and Welfare Organisation (NAV), to co-operate closely with municipal social services, through increased field presence, including in small municipalities. Other goals pursued are to create a more customer friendly, user oriented system, while reducing administrative costs and bringing down overall volume of benefit amounts dispensed.

3.2.2. Intermediate institutional actors

The county governor's office

The county governor is the central government's regional representative in each county. Although often former politicians, appointed by the government for a once renewable period of six years, governors are in the position of high civil servants ensuring continuity, meaning that removal before term is exceptional. In total, the county governor's offices have around 2 200 employees (in full time equivalents), with a county governor's office having on average around 120 employees. The staffing of the offices varies

with the size of the counties: from 229 employees in Oslo and Akershus to 76 in Aust-Agder. The total budget of the county governor's offices is approximately NOK 1.1 billion.

Formally, the county governor is subordinate to a central level of government ministry (Ministry of Government Administration and Reform) but for specific sectoral issues, such as education and health, this high level official reports to the ministry or agency in charge of that area. The 18 county² governor's office's main task is to co-ordinate with counties and municipalities, to ensure implementation of central government policies. The task of county governors in terms of fostering multilevel governance and regional co-operation is particularly complex because of overlapping of borders of different administrations and agencies that do not necessarily follow county limits. This brings forward vertical co-ordination issues that are analysed in Section 3.4.1 below. The future regional reform could provide an opportunity to introduce a certain degree of harmonisation as is the case in most countries.

The different boundaries of the regional agencies are effectively in direct need of simplification. However, it is to some extent logical that these differences exist, as many agencies try to provide services at an optimal scale that differs per public service. However, Norway seems to have a far more complex grid of administrative boundaries than many other OECD countries. These different regional boundaries certainly complicate coherent policy making, as some services and policies, closely related by nature seem difficult to connect, in view of developing stronger synergies.

Besides public services tasks to be supervised and co-ordinated, county governors also have a responsibility in overseeing administrative and financial management of local government bodies. The county governor also acts as a guarantor of constitutional rights. He often acts as a court of appeal against municipal decisions in individual cases, for example when applications for building licences are denied. He has the right and duty to review all aspects of the case, with the power to annul such a decision and even to render a new decision. Under certain circumstances the county governor can even reverse such decisions on his own initiative, even when no appeal has been made.

Ministries and single purpose regional bodies

Single purpose regional bodies are task specific units representing a ministry, agency or function on the regional level. Headquarters are usually situated in Oslo but are decentralised in certain cases. Out of a total of 57 agencies, 41 have a regional representation. One with a wide regional spread is Innovation Norway. The recent reforms in the hospital sector as well

as in public employment and social insurance schemes have even led to increase their number. They are often funded by several ministries, like Innovation Norway and may have a powerful role in territorial development. They follow the priorities drawn up by the main ministries, with the Ministry of Local Government and Regional Development playing here a strategic co-ordinating role at the national level.

Over the past 15 years a process of structural devolution has been going on in central administration, which has led to a differentiated framework. In general, agencies have increased their authority and roles while functions among agencies became more distinct and less overlapping. Until the mid-1990s major public sectors like railways, telecommunications, power, postal services and public broadcasting were organised as integrated government services, whereby the state held the roles of owner, provider, purchaser, regulator and controller. Since the mid-1990s, the commercial parts of these organisations have become corporate, while the regulatory parts have been streamlined into separate agencies. Over the last five years several agencies were merged and reorganised.

In a 2003, White Paper, the central government proposed changes in regulatory agencies. Its philosophy was that more use of markets and decentralised models of steering and control should be supplemented with stronger regulatory activities on behalf of collective interests. One of the elements in the proposed reform was that agencies should increase their independence from ministries. According to Christensen and Laegreid (2006), this has resulted in increased autonomy for the agencies and a more specific allocation of tasks, but not as much as the reform had intended.

3.2.3. Municipalities and county councils

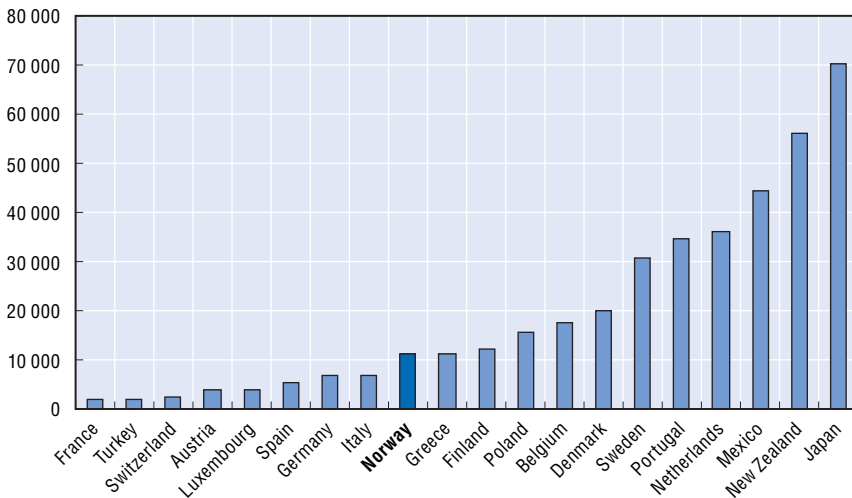
The Local Government Acts of 1992 and 2005 assign mandatory functions for counties and municipalities. In general, counties and municipalities are responsible for a substantial part of service provision (see below). Through the general principle of self-government, counties and municipalities enjoy relatively large freedom to decide how to organise their activities. The basic legal foundation of local and regional self-government is the presumption of a negatively delimited “general competence”. Counties and municipalities can freely assume tasks other than those mandated to them by legislation as long as these tasks have not been lawfully allocated to other agencies or authorities (Langset and Aurdal, 1999). Local governance is not laid down in the constitution, but there exists a long and deep rooted tradition of local independence in Norwegian history. According to the Local Government Act a Chief Executive has to be appointed by the municipal and county council. This position is the highest non-political position and is responsible for implementation of policy and running the day to day business of the county or municipality.

Municipal organisation

Size of municipalities

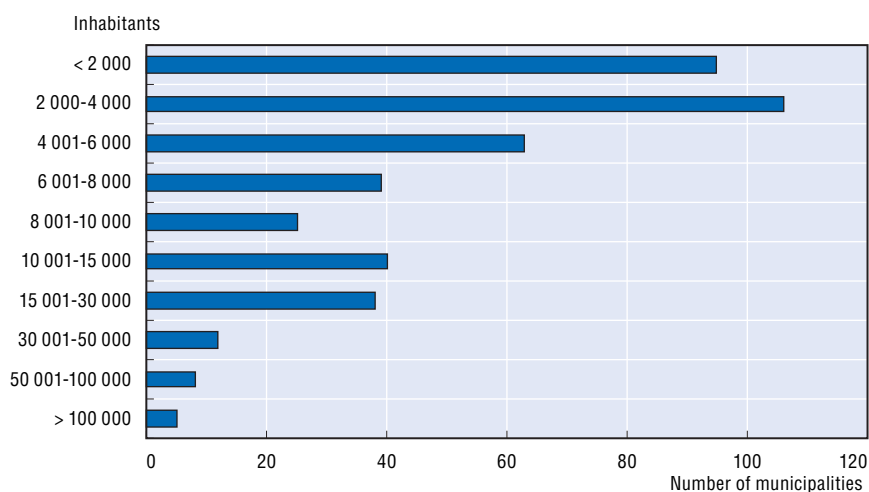
Municipalities in Norway are on average not particularly large, with 10 800 inhabitants on average. This is much less than in many OECD countries: in Japan and New Zealand, countries with very different national population figures, these have on average more than 50 000 inhabitants. At the same time, there are also quite a few OECD countries that have municipalities with even less population (see Figure 3.1) than Norway. This international comparison, uniquely based on population, does not take into account the size or the actual functions and responsibilities of subnational governments. From this point of view, there is a relation, as a certain local capacity in terms of human resources is needed to exercise responsibilities efficiently, with intermunicipal co-operation or amalgamation being answers to small size of local government. Although service provision by small units of local government is supposed to be more responsive to local needs, these often suffer from lack of capacity to provide these services effectively. There appear to be economies of scale in local public service delivery, but it is difficult to ascertain the appropriate scale for subnational public services. The scale of services depends on many factors, such as national and regional circumstances. What could be considered as an optimal population threshold can be viewed differently from one country to another, depending on the organisation of public service delivery.

Figure 3.1. **Size of municipalities**
(average number of inhabitants per municipality; 2005)



There are many municipalities in Norway that are much smaller than the average size of 10 800 inhabitants per municipality. More than three-quarters of the Norwegian municipalities, 321 out of 431, had less than 10 000 inhabitants in 2006; 47% of the municipalities had even less than 4 000 inhabitants (see Figure 3.2). The smallest municipalities in population are generally to be found in North Norway; 95% of the municipalities in the county of Finnmark have less than 10 000 inhabitants; 76% of the municipalities in Troms have less than 4 000 inhabitants. But many other areas also have small municipalities, such as the western counties of Sogn og Fjordane and More og Romsdal, that both have around 90% of municipalities with fewer than 10 000 inhabitants. The municipalities with the largest population size are to be found in the area of Oslo and its surroundings. Oslo has both a function as a county and a municipality. Only 4.5% of the municipalities in Akershus and 14.3% of the ones in Vestfold have fewer than 4 000 inhabitants. A quarter of the population lives in the five largest municipalities, having a population of over 100 000 inhabitants (see Chapter 1).

Figure 3.2. **Number of municipalities by population size in 2006**

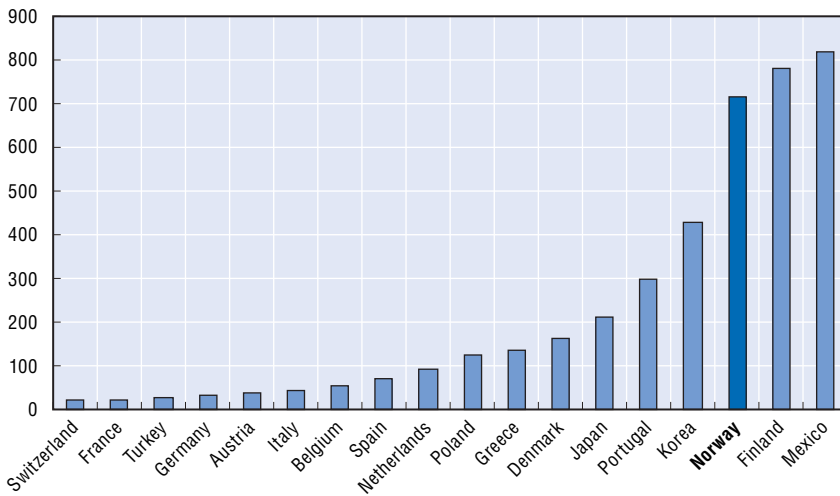


Source: Based on information provided by the Ministry of Local Government and Regional Development.

A particular feature to Norway is that it is not at all densely populated. Population density in Norway is 12 inhabitants per km². This has consequences for the size of municipalities: although Norwegian municipalities are not particularly big when it comes to average number of inhabitants, their size is large when measured in land surface per municipality: a bit more than 700 km² per municipality. Only Mexico and

Finland, countries with very different total population figures, have municipalities that are on average larger (see Figure 3.3).³ This combination of relatively low number of inhabitants and the large surface area complicates the provision of public services: inhabitants of municipalities or the providers of the services will generally have to travel long distances before use can be made of these services.

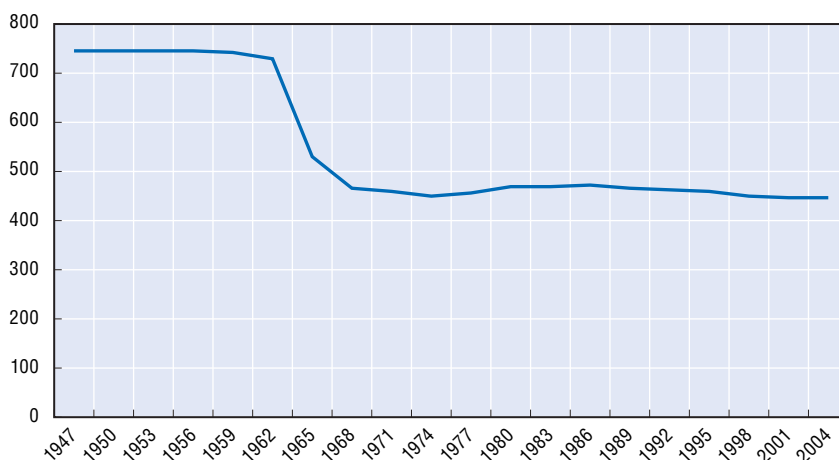
Figure 3.3. **Size of municipalities**
(average surface per municipality; 2005)



The number of municipalities in Norway has been nearly constant over the last decade. In 1950 there were 744, so the figure has in fact been reduced substantially since that date, with the largest reduction taking place between 1962 and 1965. The number of municipalities has been falling only very slowly since 1965 (see Figure 3.4). Since 1995 four mergers have occurred, one of which took place in Nordland. Another merger is planned for 2008. In all these cases, the municipalities concerned had between 1 000 and 5 000 inhabitants, as is further illustrated in Section 3.4.2.

Subnational staff

Around 30% of total employment in Norway is that of national and subnational governments. Municipalities are the biggest public employer with about 400 000 workers. The central government employs almost 250 000 persons. A relatively small part of government employment is taken up by counties. The sectors with most government employment are health and education. Health and social services are particularly dominant sectors for central and municipal governments as they represent 45% of central government

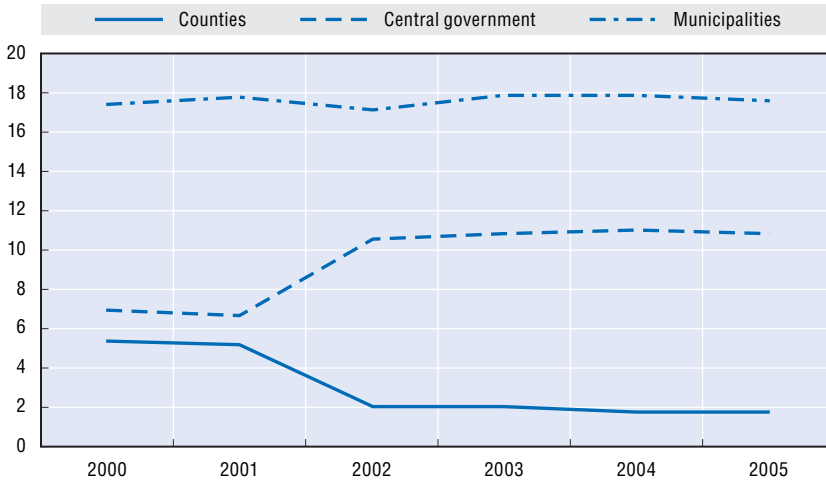
Figure 3.4. **Number of municipalities in Norway 1947-2006**

Source: Based on information provided by KS (Norwegian Association of Local and Regional Authorities).

employment and 56% of municipal employment in 2005. The education sector is the most important sector at the county level: 81% of the employment at the county level was in the education sector in 2005. The share of government employment has been stable over the last five years and remained around 30%. The reform in the health sector, that was mentioned earlier, however changed the proportions for central and county government employment: as can be seen in Figure 3.5 the ratio of central government staff goes up from 2002 and the ratio of county staff goes down. Although there has been a tendency to outsource more of public services over the last years, especially in elderly care, this trend has not been so outspoken that it becomes visible in a reduced level of government employment.

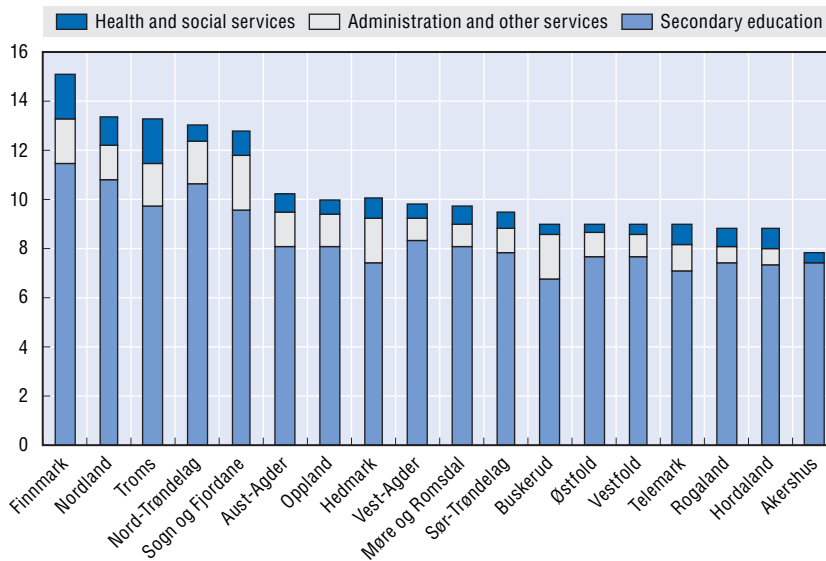
There are considerable differences in public employment levels in the regions. The counties in the north of Norway (Finnmark, Troms, Nordland and Nord-Trøndelag) have around 13 to 15 people employed per 1 000 inhabitants, whereas the urbanised areas around Oslo (Ostfold, Vestfold and Akershus) have a ratio of 8 to 9 workers per 1 000 inhabitants (see Figure 3.6). The differences are already substantial when it comes to secondary education, a sector in which Finnmark has 72% more staff employed than Buskerud. Really large differences occur in the health and social services, in which Troms employs four times more staff than Ostfold. Part of these differences between regions can be explained by the relocation policy of the national government. The latest wave was in 2003, when it was decided to move eight regulatory agencies out of Oslo. A recent example of delocalisation to a medium-sized municipality carried out in 2007 is that of Lillesand (around 9 000 inhabitants)

Figure 3.5. **National and subnational employees as share of total employment**



Source: Calculations by the OECD secretariat based on data of Statistics Norway.

Figure 3.6. **Staff employed by counties per 1 000 inhabitants (2005)**



Source: Calculations by the OECD secretariat based on data of Statistics Norway.

in Vest-Agder, which is now home to the Post and Telecommunications Authority. Although controversial in the public debate, such moves have been smoothly accepted by Parliament in the name of regional policy objectives (Christensen and Laegreid, 2004).

Certain subnational activities are organised through enterprises that are owned by counties or municipalities. These enterprises can be large employers. The limited companies for example (these are companies that are at least 50% owned by subnational governments) employ almost 45 000 people; around 9% of the employment of subnational governments. These companies are involved in public utilities, such as waste collection, sewage, electricity and renting out property. Public enterprises are most numerous in the northern county of Nordland, where around 200 of these companies are active. The lowest number, around 50, can be found in Oslo and its neighbouring county Vestfold.

Several institutions are engaged in capacity building of subnational staff. First of all, the Norwegian Association for Local and Regional Authorities (KS) offers courses to its members. Second, an institute called Samplan offers courses in subjects that are relevant to local governments, such as local planning, service provision, industrial policy and rural policy. Samplan is set up by KS, several ministries and universities. In addition, subnational staff can make use of courses offered by Statskonsult, a state owned unit specialised in public management issues. Its main clients are ministries and agencies, but subnational governments also benefit from their activities to some extent. Capacity building is also a major activity at universities and university colleges.

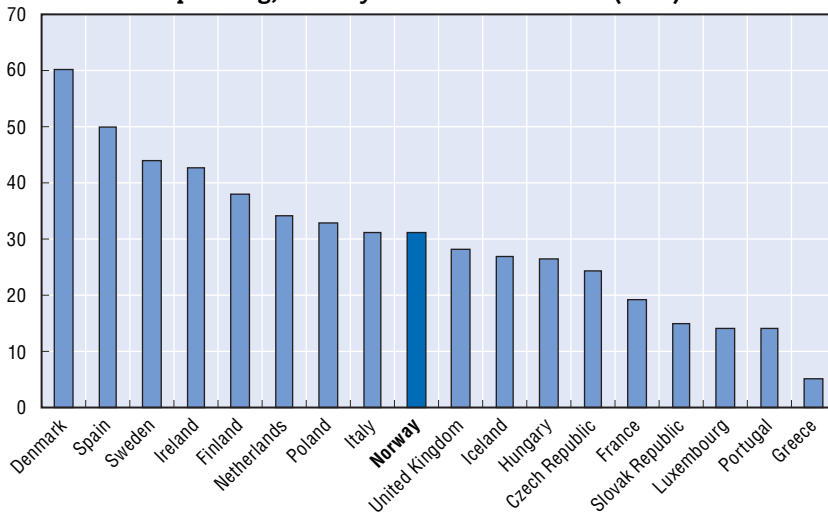
The labour market for subnational government staff is currently not particularly tight. Especially in remote areas the public sectors provides employment possibilities for higher skilled labour, for which alternative local employment opportunities are not abundant. Public sector employment could thus be seen as a means of keeping remote areas attractive to higher skilled people; it could in that sense slow down de-population trends. Ageing poses challenges, as it will increase the need for health care staff and for government officials that retire. Considering the relatively small share of young people in remote areas, ageing will have especially severe effects there.

3.3. Local government finances

3.3.1. Subnational expenditure

Norway is not particularly decentralised when compared to many OECD countries. Subnational governments only spend around 30% of total government expenditure. This is not exceptionally high or low from an international perspective (see Figure 3.7), but it is considerably lower than in the other Nordic countries. The share of subnational expenditures is only one

Figure 3.7. **Subnational government expenditures and total government spending, Norway and OECD countries (2003)**

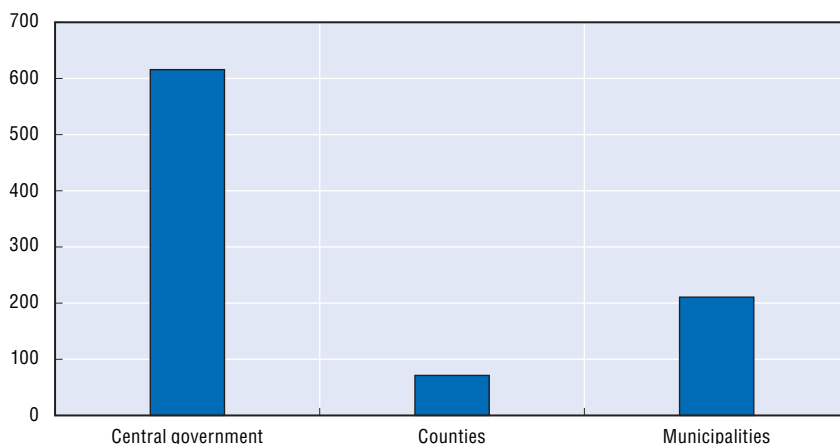


indicator of decentralisation. More elements are needed to draw a complete picture of the state of decentralisation. It is in particular important to establish how much spending autonomy subnational governments have, the extent of minimum national standards and whether they have much leeway in acquiring tax revenues.

Local government plays a more substantial role than regional government. The budgets of municipalities are considerably higher than those of counties and they also have more responsibilities (see Figure 3.8). As will be illustrated in more detail later, counties spend more than half on their budget on one field (secondary education), whereas municipalities have a broader range of responsibilities. Recent developments, such as the health sector reform of 2002, have limited the role of counties, as their previous responsibility for hospitals was taken away from them and removed to five (now four) health enterprises.

The majority of subnational spending relates to programmes for which the central government sets standards or guidelines. Within these fields, it could be argued that local governments act as an agent for central government, more than as an independent actor. The mandatory welfare services represent 70-80% of the budgets of municipalities and 80-90% of the budgets of the regions, while the rest covers local public goods. The last decade has seen mixed developments with respect to standardisation by the central government. On the one hand, the parliament has on several issues demanded more services from local government. Examples are the decision to start education at the age of six instead

Figure 3.8. **Expenditures of central, regional and local governments in Norway (billion NOK, 2005)**



Source: Database Statistics Norway.

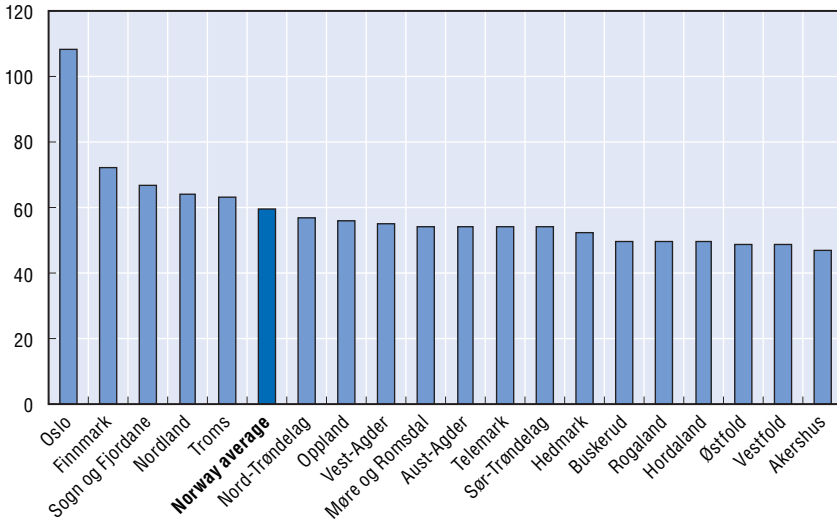
of seven (in 1997), the increased standards for elderly care and the decision to provide kindergarten to all children (in 2004). On the other hand, there are other examples pointing in the direction of increasing autonomy for local governments, such as abolishment of maximum class size regulations and, from 2004, the freedom of local governments to set the wages of its employees.

There are remarkable differences in expenditures across Norway. When all subnational expenditures (both municipal and county spending) are added up, it turns out that the region of Oslo is spending the most per inhabitant, almost twice the average in the whole of Norway. Regions that also spend much are the regions in the north of Norway (Finnmark, Troms and Nordland), that are also the least populated areas (see Figure 3.9). The regions with the lowest expenditures are the neighbouring counties of Oslo, namely Akershus, Vestfold and Ostfold. These three regions are the most urban areas after Oslo.

Counties

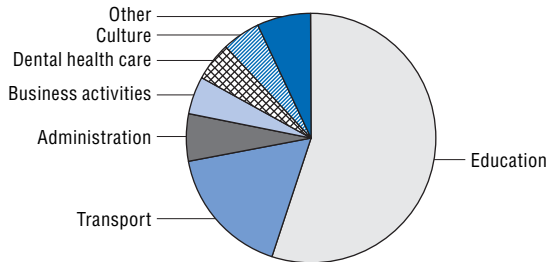
Counties are mainly responsible for upper secondary education: 55% of their budget is on average spent on this item (see Figure 3.10). Another large responsibility is transport. The county has relatively minor responsibilities in business activities, dental health care and culture. There are considerable differences between counties. The counties in the north of Norway spend relatively less on education (between 41% and 45% of their budgets), but more on business activities (for example 13% of the expenditure of the county of Troms). The opposite is the case for the counties surrounding Oslo, that spend around 65% of their budget on education, but around 1% on business activities.

Figure 3.9. **Subnational expenditures (county and municipal) per capita in Norway (2005)**



Source: Calculations by the OECD secretariat based on data provided by KS.

Figure 3.10. **Main expenditure categories of counties (2005)**



Source: Database Statistics Norway.

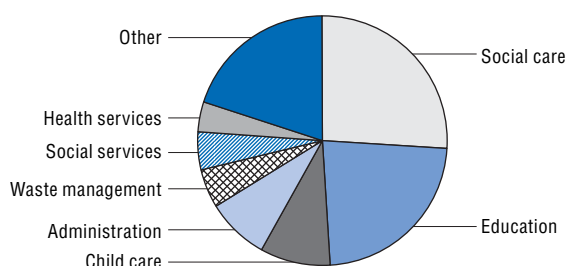
Municipalities

Unlike counties, municipalities do not have one main responsibility. Around a quarter of municipal expenditures reside in social care; another large responsibility is in primary education and lower secondary education. In addition to that, municipalities also have responsibilities in child care, waste management and social services (see Figure 3.11).

Wages and salary costs are a larger component of municipal budgets in North Norway than in the rest of Norway. This corresponds to data that was presented beforehand (in Figure 3.6) on the relatively higher number of county staff in North Norway, as compared to the rest of the country. Not

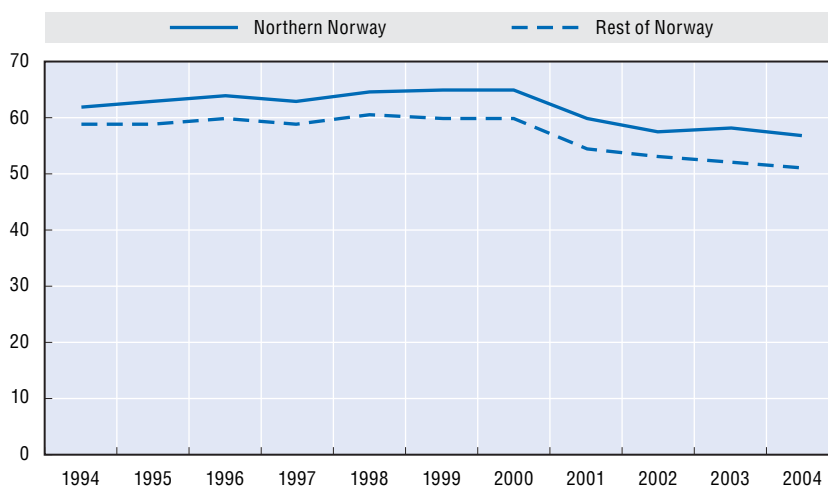
only counties, but also municipalities in North Norway have more staff than elsewhere. Besides, analysis of the personnel costs as share of the budget shows that this is a growing trend. The gap between local governments in North Norway and those situated in other areas has grown over the last decade from less than 3%-points to around 6%-points (see Figure 3.12).

Figure 3.11. **Main expenditure categories of municipalities (2005)**



Source: Database Statistics Norway.

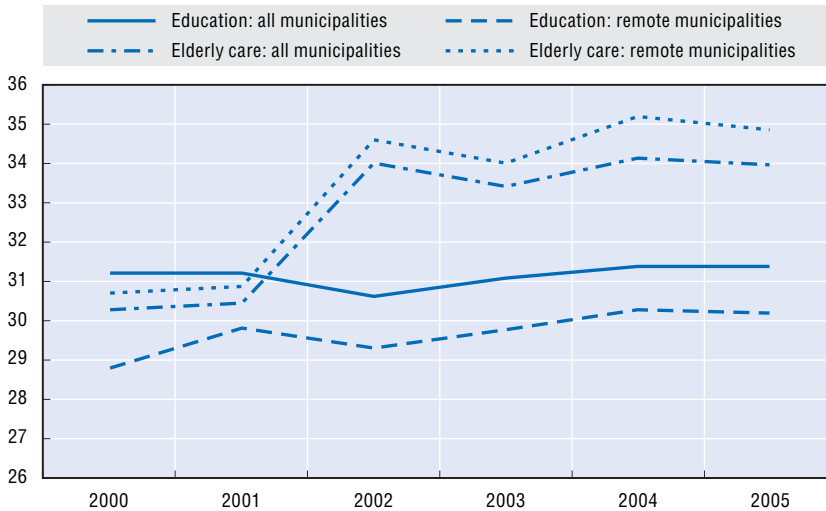
Figure 3.12. **Personnel costs as percentage of the municipal budget in North Norway and the rest of Norway over 1994-2004**



Source: Calculations by the OECD secretariat based on data provided by KS.

Health care, especially elderly care, is a more substantive expenditure item in remote municipalities, education a relatively less important expenditure item in these. The expenses for elderly care have been going up over the last six years, both in remote municipalities and the rest of the municipalities in Norway, as Figure 3.13 below demonstrates. Over the last year there has only been a very slight divergence in expenditures in this respect. So far there does

Figure 3.13. **Expenditures in education and elderly care by municipalities (as % of municipal budget)**



Note: What is defined here as “all municipalities” are all Norwegian municipalities except Oslo. What is defined here as “remote municipalities” are Norwegian municipalities with less than 1 000 inhabitants.

Source: Calculations by the OECD secretariat based on data provided by Ministry of Local Government and Regional Development.

not seem to be an indication that ageing has increasingly severe effects in remote municipalities more than in other Norwegian municipalities. Education expenditure has remained relatively stable over the last six years in both categories of municipalities over Norway.

3.3.2. Subnational revenues

The revenue sources of counties and municipalities are comparable. For both government tiers the income tax is the most important source of revenues, to be followed by a block grant from the central government. Earmarked grants and fees and charges also play an important role to complete other sources of revenues, especially for municipalities. Income tax revenues are split between municipalities, counties and central government. Each level of government receives a fixed percentage of revenues accruing from the 28% flat-rate tax on personal income. Thus the proposal that was implemented for 2006 was 13.6% as a maximum tax rate for municipalities, 3.0% for the counties and 11.4% for the central government. The progressive rate for higher income brackets is reserved to central government.

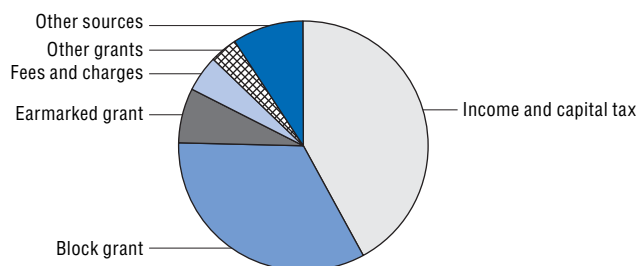
There is a separate general purpose grant scheme for both municipalities and counties. The principles and workings of both systems are similar. Most of

the grants are distributed as general grants based on objective criteria, but a variety of matching grants and funds for new political initiatives are in place. Part of the subnational revenues come from the central government in the form of compensation for VAT that is being paid by subnational governments for services that could have been provided in-house. The VAT-compensation is paid to provide a level playing field to private enterprises for certain services that were formerly accomplished by municipalities. This enhances competition by private providers.

County revenues

Counties get a relatively larger share of their revenues from the block grant and a relatively smaller share from earmarked grants and fees and charges (see Figure 3.14). There are considerable differences between counties when it comes to their main revenue sources. The main revenue sources for the counties in North Norway are grants from the central government and not the revenues from the income tax. Grants make up more than half of the revenues for these counties, up to 62% in Nordland and Finnmark. Income tax revenues, however, amount to less than a quarter of the budget for counties in the North. The inverse pattern can be discerned in Oslo and its surrounding counties: a high share of income tax revenues (up to 70% in Akershus) and a low share of government grants (10% in Oslo, of which only 3.8% are block grants). Concerning income from fees and charges, Oslo has the highest share, with 13% of its revenues from this source.

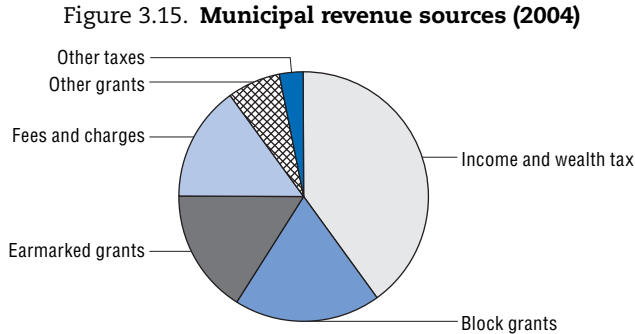
Figure 3.14. **County revenues (2005)**



Source: Database Statistics Norway.

Municipal revenues

Municipal revenues are for a large part determined by the income tax: it represented 40% of municipal revenue in 2004. Other large revenue sources are grants, both block grants and earmarked grants (see Figure 3.15). A relatively large part of municipal revenues (15%) comes from fees and charges. This is large from an international perspective. Not many municipalities in OECD



Source: Database Statistics Norway.

countries manage to get such a large share of their budget from fees and charges. Another feature of Norwegian local government revenues is the modest share of the property tax as compared to most OECD countries, where it constitutes the main local tax. In Norway, the property tax represented only around 2% of municipal revenues in 2004.

Municipalities are free to set their tax rates up to the maximum rates that are set by Parliament. In practice, no municipality has in the last decades set a tax rate below the maximum rate. The municipal revenues from the income tax could thus be considered a tax share rather than a tax over which it has much local autonomy. Some observers think that this phenomenon of massive rate-setting at the maximum is due to fear at the subnational level that setting a rate below the maximum will invite the central government to cut grants for this municipality (Rattso, 2003). Such a policy has never been implemented, but central government has discretionary grants and can also influence local revenues through matching grants and funds channeled to promote new services.

Prior to 2007, use of the property tax was limited to urban areas and areas under construction evolving as such. Outside such areas the property tax could also be levied on power plants. Around 242 of 431 municipalities made use of this property tax. As this definition appeared rather unclear, it gave way to many court cases where property owners argued that the area under taxation was not urban (Fiva and Rattso, 2005). By an amendment to the Local Government Act adopted in June 2006, the property tax may from 2007 onwards be levied in all municipalities. It is, however, still up to the municipal authority to decide whether the property tax shall be levied or not. The amendment is designed to avoid problems of interpretation and to achieve more equality in property taxation. The tax rate remains restricted to a narrow band, between 0.2% and 0.7%. Most of local governments apply the maximum rate. In local

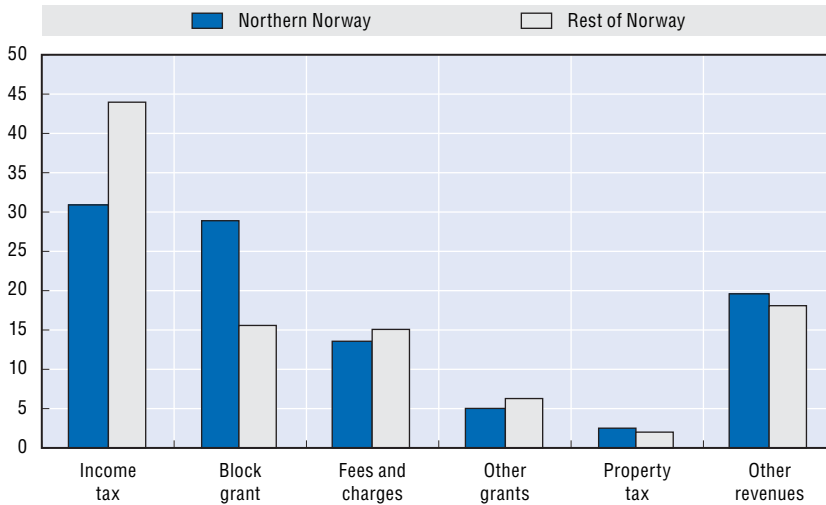
governments with a residential property tax, it is on average about NOK 1 300 (EUR 160) per standard house per year. Use of property taxation has significant cost reducing effects for municipalities (Borge, L-E and J. Rattso, 2003).

The general grant (also called block grant) provides around a quarter of municipal revenues. The largest part of the municipal general grant is the per capita grant: this makes up NOK 28 billion of the total amount of NOK 32.4 billion in 2006. NOK 1.7 billion was in 2006 reserved for the regional grants for remote areas and North Norway that benefit municipalities within these territories. NOK 2.7 billion is for discretionary grants that can be given out by county governors and ministries.

A relatively large part of local revenues come from charges and user fees. The most important relate to utilities, care for the elderly and kindergartens. Charges and fees cannot exceed the production costs of the service. In some cases an additional limit is added by the central government, such as for child care, where the maximum fee is determined at NOK 2 750 per child per month. Although user charges are regulated so that they cannot exceed total production costs, the share of costs covered may exceed 100% in a single year, as long as user charges do not exceed total production costs over a period of three to five years. User charges have been illustrated to contribute to cost control in the Norwegian public sector: an increase in user charge financing by 10%-points is predicted to reduce the unit costs by up to 10%. The explanation is found in the interaction between a political authority and a service producing bureau which treats the user charge as fixed, with an incentive for controlling costs because slack cannot be compensated.⁴

Composition of municipal revenues shows considerable regional variety, as for county revenues. Municipalities in North Norway rely less on income taxes and more on the block grant (see Figure 3.16). Other differences between municipalities in the north and rest of Norway are less outspoken. What is remarkable is that northern municipalities have a higher share of property tax income. The opposite could have been expected, considering that disposable income in the north is lower, that income and property values are related and that all municipalities apply the maximum tax rates. This cannot be explained by the use that is made of the property tax: around 60% of both municipalities in the North and in the rest of Norway make use of this fiscal instrument. This suggests that the fiscal position of urban areas in North Norway, at least when it comes to property income, is better than the average urban area in the rest of Norway. The few urban areas in the north function clearly as economic magnets attracting skilled people.

Figure 3.16. **Share of municipal revenues (in %) in North Norway and the rest of Norway (2005)**



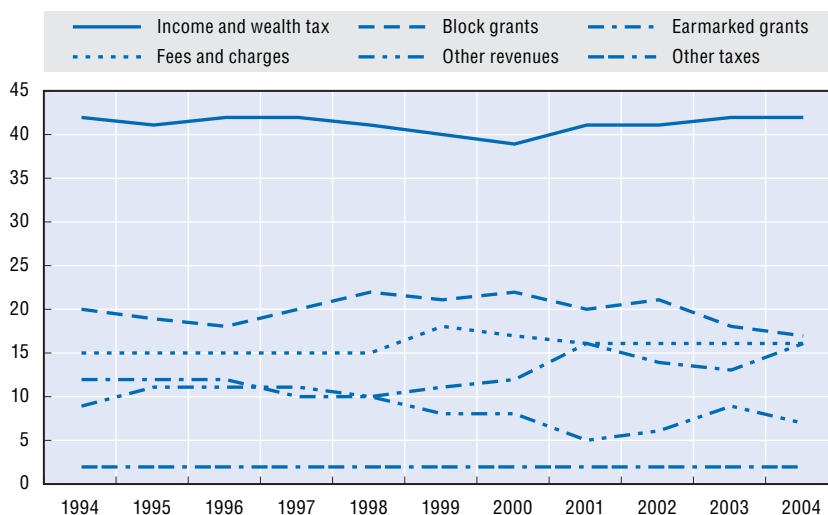
Source: Calculations by the OECD secretariat based on data provided by KS.

Borrowing

Subnational governments are free to borrow for investment purposes. Long-term financial obligations or contracts that have a budgetary effect beyond four years are subject to approval by the county governor or the Ministry of Local Government and Regional Development in certain cases. Approval is required in situations in which budgets or financial plans do not cover all expenses or when the adopted plan for solving a deficit is not followed. A public register, called ROBEK, was created in 2001 to list all the subnational governments subject to this obligation. Currently, the register includes 73 municipalities. In 2004, the net borrowing of municipalities was NOK 10 billion, slightly less than 5% of their expenditure.

Trends in revenue sources

The share of the different revenue sources has been relatively stable over the last years. To avoid large differences in the revenue growth of local authorities, the national government aims an equal growth rate of taxes and block grants. In the 1990s, when the growth rate of the local tax base exceeded the desired growth of total local government revenue, this was accomplished by reducing the maximum local income tax rates allowed. As can be seen from Figure 3.17, the revenue shares from the income tax and block grant mirror each other: when the share of income tax revenues goes down, the share of the block grant goes up, and *vice versa*. In 1996, there was a grant reform that transformed some earmarked

Figure 3.17. **Trends in municipal revenues 1994-2004**

Source: Calculations by the OECD secretariat based on data provided by KS.

grants into a non-earmarked grant. The effects of this reform explain that the share of block grants goes up slightly at that time while the share of earmarked grants goes down. However, contrary to preceding trends, the share of earmarked grants started rising in recent years. The rise in earmarked grants since 2004 and the simultaneous drop in block grants can be explained by the introduction of a grant that compensates municipalities for the VAT to be paid for purchase of services on the market instead of providing in-house. This grant, defined as an earmarked grant, aims at creating a level playing field with respect to services.

One of the disadvantages of the income tax is that it is pro-cyclical. This is the reason why many OECD countries use the income tax as a national tax: as there are several national tax bases, volatility can thus be evened out. In addition, national governments dispose of policy instruments to influence macroeconomic stability. Data confirms that the local income tax revenues in Norway are pro-cyclical: the revenue growth runs parallel to developments in GDP (see Figure 3.18). Considering that the income tax is the most important revenue source for municipalities, their budgets are subject to instability. As mentioned before, the national government has tried to counter this volatility by adjusting the maximally allowed tax rate and the block grant. In practice this means that the central government has large control over municipal resources.

Figure 3.18. **Pro-cyclicality of the local income tax revenues**

Source: Calculations by the OECD Secretariat based on data provided by KS and Statistics Norway.

Financial management

The Norwegian system entails extensive delegation to public agencies at different territorial levels. Ministries mainly manage these through a dialogue and discussion approach. However, due to the high degree of information asymmetry between ministries and agencies, a recently conducted OECD budget review (Anderson, *et al.*, 2006) remarked that the agencies will tend to have the upper hand in these discussions. Ministries' management and monitoring capacity vary depending on size, expertise and experience of staff and the monitoring systems established. Individual line ministries have the flexibility to establish their own approach for overseeing and managing agencies. In practice, most agencies enjoy a high degree of autonomy in terms of how they run internal operations and implement their programmes and budgets.

There are many government-wide requirements for the development of performance information. Performance information is requested by different ministries in their letter of instruction to agencies. Despite these requirements and processes, it has been observed in the OECD budget review that many ministries and agencies have made only limited progress in developing meaningful performance measures and using them in the budget process. In many cases ministries do not have the expertise or knowledge to develop performance measurement or monitor performance. Besides, ministries do not tend to apply financial rewards or sanctions to agencies that achieve or fail to achieve their goals and targets.

More performance related data are available concerning subnational governments. Publication of data on subnational activities provides an incentive for subnational governments to perform well. Data is collected within the framework of the KOSTRA-system (see Box 3.2). This system makes financial and budgetary data on subnational government activities available on-line and thus improves the accountability of subnational government spending. As a large part of subnational revenues have an un-earmarked character, no direct financial incentives are involved to improve subnational spending efficiency. On the other hand, this leaves subnational governments the freedom to spend resources within the boundaries of their legal responsibilities as they deem fit. Thus subnational governments can transfer savings from cost-efficiency measures in the delivery of public services towards activities aimed at strengthening regional economic development.

Box 3.2. **KOSTRA database (Subnational government reporting)**

KOSTRA is a national electronic information system on subnational government activities set up in 2002 that permits useful comparisons between spending patterns of different categories of municipalities. The system is the result of co-operation between the central government, the national statistical office, SSB, and subnational governments. It provides data for the central government to analyse trends within local government and is a tool for subnational governments internal planning and benchmarking.

KOSTRA brings together and replaces several thematic systems and contains financial, cost, productivity and service coverage information. Data is reported directly from counties and municipalities and combined with demographic and other statistics. Presentation of the data is done on three levels.

1. 40 key indicators such as overall income, expenditure and productivity.
2. 600-700 indicators covering 16-service programmes.
3. Basic data from which the aggregates are derived.

SSB publishes new data twice a year. First on March 15 for the last year and secondly when the figures have been further checked by the subnational governments themselves and by SSB on June 15.

Sources: Presentation by Jan Persson, Norwegian Ministry of Finance at OECD workshop on Efficiency of sub-central spending May 2006 and KOSTRA, *odin.dep.no*.

Assessment

The institutional framework in Norway offers a remarkable combination of centralism and delegated responsibilities. On the one hand, ministries are relatively small and many responsibilities are delegated to agencies with regional branches. Although the share of subnational expenditures is not higher than the average in the OECD, the amount of subnational staff is substantive, especially in municipalities. Moreover, subnational governments have few earmarked sources of income. Many subnational functions are mandatory and subject to rigorous standards. The major player in regional governance is in fact a representative of the central government (county governor, agency office). As many costs are fixed, subnational governments have limited room for additional expenditure. Revenue sources may be largely un-earmarked, but subnational governments in practise have little leeway to generate additional revenue, as all subnational governments have reached the maximum tax rate.

Regional policy concerns, particularly for rural and peripheral areas seem to form the basis of this remarkable institutional framework. Central standards for public services and compensatory measures are set so remoteness and population dispersion are not considered as obstacles to dispense an appropriate level and quality of public services. Maintaining a similar level of public services all over the country is a stable policy objective maintained by all governments and expected by citizens. Also, tax rates are capped so that no tax competition between subnational governments will arise, thus blurring differences in local economic activity and entrepreneurship. The ambitious equalisation system (see next section) is the tool that generates funding where it is needed to ensure that municipalities are compensated for higher costs and lower tax capacity.

Within the framework of this system, embedded in the concept of the Nordic welfare state, there is room for an increase in local fiscal autonomy. The impossibility for municipalities to collect more than current revenues limits their capacity to provide more funds for economic development. More leeway for local tax rate increases, within reasonable and well defined limits, added to the extension of the property tax as introduced in 2007, can provide local governments with additional stable resources, as compared to the more volatile income tax. Such an opening would constitute an incentive to devote more resources to economic development, assuming that revenues are made available for that purpose only once public service delivery is fully ensured along national standards.

3.3.3. Fiscal equalisation

The principle of the Norwegian fiscal equalisation system is that municipalities and counties are fully compensated for above-average expenditure needs and partly compensated for lower than average fiscal capacity. Municipalities with unfavourable regional circumstances (remoteness or location in the northern periphery) get additional compensation. In the Norwegian fiscal equalisation system both the fiscal and the expenditure needs equalisation are self-financing: the subnational governments with high fiscal capacity pay the low capacity subnational units; the units with low expenditure needs pay for the units with high expenditure needs. This is implemented via the general purpose grant scheme. This general purpose grant provides all subnational governments with a per capita grant.

In this general grant the different elements of the equalisation system are taken into account: subnational units that contribute to the equalisation system (because of high fiscal capacity and/or low expenditure needs) get a grant from which the required contribution is subtracted. The regional elements in the general purpose grant scheme are paid from the centre, not directly from the revenues of other subnational units. The same is true for the discretionary grant that is considered as a part of the equalisation system. Although the total general grant to municipalities added up to NOK 32.4 billion in 2006, only NOK 12.5 billion can be considered to have equalising effects: the rest of the general grant consists of funds allocated on a per capita basis. The equalising elements are the following: NOK 8.5 billion is the amount that 63 contributing municipalities pay to 368 municipalities via the tax capacity and expenditure needs equalisation; from the general tax revenues NOK 1.1 billion is paid to municipalities in North Norway, 0.6 billion to remote municipalities and 2.3 billion as discretionary grant.

Fiscal capacity equalisation

The fiscal capacity equalisation compensates municipalities for a low fiscal capacity, to be paid by municipalities with high fiscal capacity. Fiscal capacity refers in this respect to the tax bases for income tax and corporate tax. As only around 60% of the Norwegian municipalities have property taxes and natural resource taxes, these tax bases are not taken into account in the fiscal equalisation scheme; this means that municipalities with a below-average property tax base are not compensated for it by municipalities with a higher than average tax base. This might distort the impact of the equalisation system: although personal income and property values are usually related, this is not necessarily always the case. Thus, elderly people tend to have relatively low personal income, but relatively valuable property. Leaving the

property tax base out of the equalisation system might thus favour regions with many elderly people (such as North Norway), as their grants are not corrected for their relatively better possibilities to get property tax revenues.

The Norwegian equalisation scheme does not compensate fully for below average tax capacity, as will be explained below. The equalisation rate for fiscal capacity equalisation is 55%; this means that municipalities with a below average tax capacity get a transfer making up 55% of the difference between the actual tax base per capita in the municipality and the tax base per capita on average in a Norwegian municipality. A municipality with a high tax capacity contributes 55% of the difference between its actual tax base and the average. For municipalities that have a tax base that is lower than 90% of the average, there is an extra top up of 35% of the difference between the actual tax base and the 90% threshold. A practical illustration of the functioning of the system is given below, in Box 3.3.

Box 3.3. Examples of tax equalisation

The functioning of the tax equalisation system will be illustrated by taking three Norwegian municipalities with different fiscal circumstances, Kongsberg, Bamble and Nordkapp:

- The municipality of Kongsberg in the county of Buskerud, in the south of Norway, had in 2006 a tax capacity per capita of 110% of the average. Fifty-five per cent of the tax capacity above the average is reduced. Kongsberg will have to contribute into the tax equalisation system until it has reached a tax capacity of 104.5% per capita.
- The municipality of Bamble in the southern county of Telemark had in 2006 a tax capacity per capita of 92% of the average. Bamble will thus receive a transfer of 55% of the tax capacity “deficit”; that is: the difference between 92% and 100%. This results in a tax capacity of 96.4% for Bamble.
- The municipality of Nordkapp in the northern county of Finnmark has a tax capacity per capita of 80% of the average. Like Bamble it will receive the transfer of 55%. This brings the tax capacity of Nordkapp up to 91%. Since its capacity in the beginning was below 90%, Nordkapp will receive an additional top up of 35% of the difference between 90% and 80%. This top up of 3.5% brings the final fiscal capacity of Nordkapp up to 94.5%.

Source: Ministry of Local Government and Regional Development (2005), *Inntektssystemet for kommuner og fylkeskommuner 2006*, Beregningsteknisk dokumentasjon til St.prp.nr.1 (2005-2006), Kommunal- og Regionaldepartementet, Oslo.

Expenditure needs equalisation

The expenditure needs equalisation compensates municipalities for higher than average expenditure needs to be paid by municipalities with below-average expenditure needs. These expenditure needs are the objective costs that need to be made for fulfilling local responsibilities with respect to goods and services, such as education and social support. The equalisation scheme compensates for objective costs that cannot be influenced by the municipalities, not for inefficiency or additional policy initiatives by that municipality. The Norwegian equalisation system compensates completely for high expenditure needs on the basis of a complete set of objective criteria (see Table 3.1 for the criteria and their weight).

Table 3.1. Criteria expenditure needs equalisation for municipalities in Norway

Criterion	Weight in percentage
1. Base value	2.5
2. Inhabitants 0-5 years	2.3
3. Inhabitants 6-15 years	30.8
4. Inhabitants 16-66 years	12.0
5. Inhabitants 67-79 years	8.5
6. Inhabitants 80-89 years	13.3
7. Inhabitants 90 years and older	4.9
8. Divorced and separated 16-59 years	3.8
9. Unemployed 16-59 years	1.1
10. Calculated travel time	1.5
11. Travel time to nearest regional centre	1.0
12. Travel time to nearest local centre	1.1
13. Mortality rate	2.5
14. Non-married 67 years and older	2.5
15. Immigrants	0.5
16. Mentally disabled 16 years and older	6.6
17. Mentally disabled under 16	0.4
18. Total population criterion	4.2
19. Land utilisation criterion	0.5
	100

Source: Ministry of Local Government and Regional Development 2005.

There are 19 criteria that are supposed to influence the costs of municipalities in Norway. These are demographic criteria (such as the percentage of young and old people), geographic factors (travel time to nearby municipality) and social factors (number of unemployed, of mentally retarded). Lists are made for each factor to see which municipalities score higher and lower than the average. The 19 criteria are weighed and thus lead to an index of standard costs

in an average municipality. Cost criteria in the Norwegian equalisation system that have a relatively heavy weight are the number of people between six and 15 years of age and the number of elderly between 80 and 89 years of age. An illustration of how the expenditure needs equalisation grant is calculated is given in Box 3.4, illustrating two extreme examples: that of Oslo and that of the small rural municipality of Steigen in Nordland.

Box 3.4. Example of expenditure needs equalisation for Oslo and Steigen

- Oslo** had 530 000 inhabitants in 2005. The first step in determining the expenditure needs equalisation grant for Oslo is to make sure how it scores on the 19 indicators, as compared to the Norwegian municipalities on average. On the basis of these scores and using the weights for the different indicators an aggregate expenditure index for Oslo is calculated. The expenditure index calculated for Oslo is 0.9094; this means that its calculated expenditure needs are 9% lower than an average municipality in Norway. The lower expenditure needs are due to a fewer elderly people and good accessibility of services. Factors that make Oslo more expensive, according to the equalisation system, are the share of foreigners in the population, but this does not outweigh the cost reducing factors. The standard expenditure needs for an average municipality in Norway are NOK 26 065 per capita. This amount, multiplied by the index for Oslo, implies expenditure needs for Oslo of NOK 23 704 per capita ($26\,065 \times 0.9094$). The difference between the standard expenditure needs and the needs of Oslo is NOK 2 088. This is what Oslo contributes per capita to the cost equalisation system. In total, this amounts to NOK 1.25 billion.
- Steigen** had 2 800 inhabitants in 2005. The expenditure index calculated for Steigen is 1.3103; its expenditure needs are thus 31% higher than for the average municipality in Norway. These expenditure needs are greater, since Steigen has relatively many elderly people, large travel distances, high unemployment and high land utilisation. Factors that decrease the expenditure needs are the relatively low number of children, immigrants and mentally disabled people, but these factors do not weigh up against the cost increasing factors. The multiplication of the expenditure index for Steigen with the standard expenditure needs for an average municipality in Norway leads to estimated expenditure needs of NOK 34 152 per capita ($26\,065 \times 1.3103$). This is around 50% more than the calculated expenditure needs per capita of Oslo. The benefit that Steigen has from the cost equalisation system is NOK 8 087 per capita. In total this is NOK 22.7 million.

Source: OECD and Ministry of Local Government and Regional Development (2005), *Inntektssystemet for kommuner og fylkeskommuner 2006*, Beregningsteknisk dokumentasjon til St.prp.nr.1 (2005-2006), Kommunal- og Regionaldepartementet, Oslo.

Regional needs equalisation

In addition to the expenditure needs equalisation, there are also two elements in the equalisation system that explicitly favour remote and northern areas: the grant for remote areas and the grant for North Norway. The grant for remote areas aims at ensuring public service quality in small and peripheral municipalities. Municipalities that get this grant have less than 3 200 inhabitants and have a tax capacity lower than 110% of the average. The grant per remote municipality is NOK 3.3 million and NOK 8 million for remote municipalities in Finnmark and Nord-Troms. One hundred and forty-eight municipalities received this transfer in 2006. The total amount spent on grants for remote areas is NOK 556 million in 2006. The second explicit regional element in the general purpose grant scheme is the grant for North Norway. The grant is NOK 1 351 per capita for municipalities in Nordland, NOK 2 591 for municipalities in Troms and NOK 6 331 for municipalities in Finnmark. The total amount spent on grants for North Norway is NOK 1.2 billion.

Discretionary grants

The discretionary grant is the only element in the equalisation system that is not distributed with a transparent formula. It is therefore difficult to seize what the rationale behind the allocation of the grant is. Almost all municipalities in Norway receive a discretionary grant: only 16 municipalities do not. The largest discretionary grants per capita go to small municipalities: of the 150 municipalities that benefit the most from the discretionary grants only five municipalities have more than 4 000 inhabitants. Although the discretionary grant is in principle flexible and subject to yearly change, in practice the amounts received and the list of municipalities that receive the grant seem relatively stable over the years.

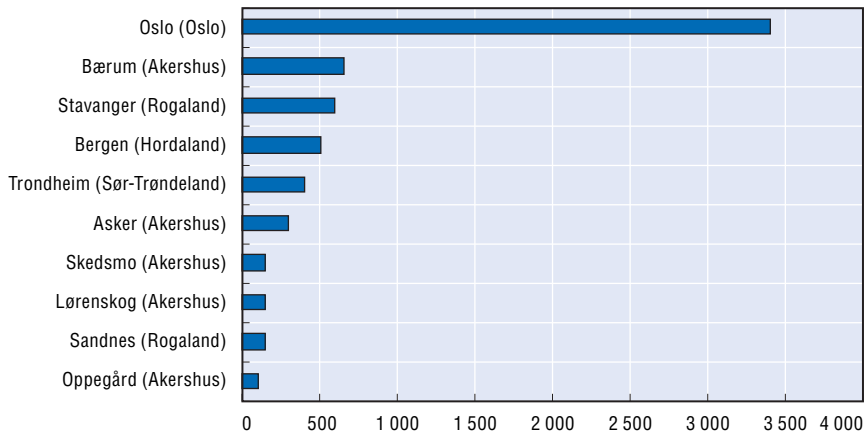
Who is the net receiver of equalisation transfers?

The different elements of the equalisation system that are described above have effects that are not necessarily similar. Around 348 municipalities benefit from fiscal capacity equalisation, 338 from expenditure needs equalisation, 148 from the grant for remote areas and 87 from the grant for North Norway. The two last grants are paid from general tax revenues, but the fiscal capacity and expenditure needs equalisation are paid for by other municipalities. This means that some municipalities are a net contributor to the equalisation system.

Around one municipality in eight (55 municipalities in total) is a net contributor to the equalisation system. By far the largest contributor in absolute terms is Oslo, contributing around NOK 3.4 billion per year into the system. The other four municipalities with more than 100 000 inhabitants

complete the first five contributors (Figure 3.19). The next five contributors are all medium-sized municipalities. What the ten largest contributors have in common is that they all have higher than average tax capacity and lower than average spending needs; in addition, they are not remote and do not come from North Norway. Five of the ten largest contributing municipalities are from the county of Akershus, one of the counties that borders Oslo. Almost all municipalities in the county of Akershus (17 out of 22) are net contributors.

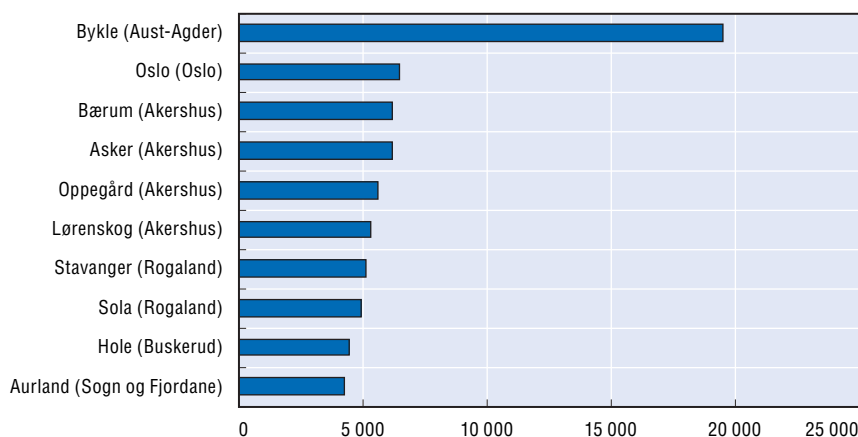
Figure 3.19. **Ten largest contributors to the municipal equalisation system (million NOK; 2005)**



Source: Calculations by the OECD Secretariat based on data provided by KS and Statistics Norway.

The picture changes a bit when the contribution per inhabitant is taken into account (see Figure 3.20). Three of the five largest cities remain represented, as well as some of the medium-sized cities in Akershus. But also some small municipalities appear to be large contributors in relative terms. The largest contributor with almost NOK 20 000 per inhabitant, Bykle (Aust Agder), only has 857 inhabitants. These smaller municipalities do not have spending needs that are much lower than the average (in two cases they are even above the average), but have a strong above-average tax capacity that makes them large contributors. Bykle has a tax capacity more than three times the average. Aurland (Sogn og Fjordane) has a tax base that is 80% higher and Hole (Buskerud) one that is almost 40% above the national average. This can sometimes be explained by the presence of natural resources: Bykle has several hydroelectric plants that contribute to the high tax capacity. When it comes to expenditure needs, large cities and municipalities in counties such as Akershus score low. Oslo and Stavanger have expenditure needs that are 9% lower than the average and many municipalities in Akershus have even lower needs. This has much to do with demographic factors, with a large weight in

Figure 3.20. **Ten largest contributors per capita to the municipal equalisation system (in NOK per inhabitant; 2005)**

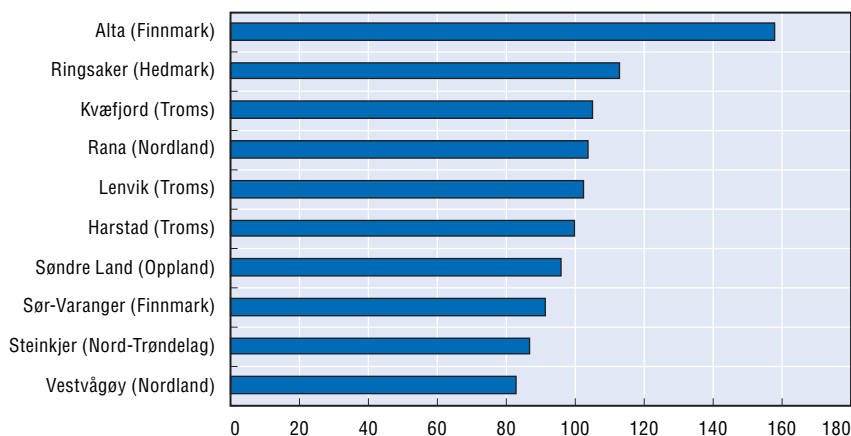


Source: Calculations by the OECD Secretariat based on data provided by KS and Statistics Norway.

expenditure needs equalisation: there are relatively few elderly people in these municipalities, so they get fewer funds for expenditure needs.

The municipalities that profit most in absolute terms from the municipal equalisation system are mostly from the northern counties. This is true for all ten largest receivers except for Ringsaker (Hedmark) and Søndre Land (Oppland) in eastern Norway (see Figure 3.21). Their size is not particularly

Figure 3.21. **Ten municipalities benefiting most in absolute terms from equalisation (million NOK; 2005)**

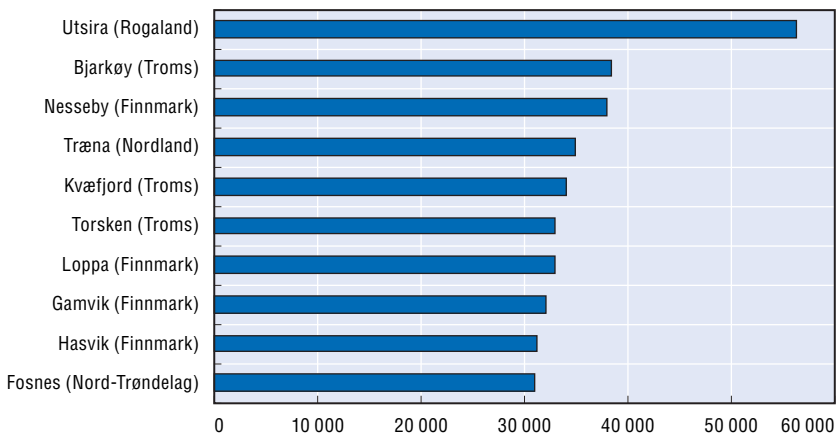


Source: Calculations by the OECD Secretariat based on data provided by KS and Statistics Norway.

small for Norwegian municipalities: around 15 000 inhabitants, which in fact proportionally increases the amount received for the grant for North Norway. This is the case of Alta and Sor-Varanger, the most populated municipalities in Finnmark, the county for which the North Norway grant is the highest. The expenditure needs for these ten municipalities do not diverge much from the average in Norway; only Kvaefjord (Troms) and Sondre Land (Oppland) have substantially higher expenditure needs. Three of the ten municipalities – Alta, Rana (Nordland) and Harstad (Troms) – have even expenditure needs that are lower than the average in Norway. The tax capacity in these municipalities is however considerably below average, down to 73% of the average in the case of Kvaefjord.

The profile of the municipalities that benefit most in relative terms is different: they are all small (see Figure 3.22). None of the municipalities (except Kvaefjord) has more than 1 300 inhabitants. The municipality that benefits the most, Utsira (Rogaland), is even the smallest municipality in Norway (213 inhabitants in 2005). All ten municipalities fall under the definition of remote areas. All municipalities except Utsira are from North Norway (if Nord-Trøndelag is also considered in this case to be North Norway). All have a tax capacity well below the average and expenditure needs considerably above the average. The tax base of some is 35% lower than the average; the expenditure needs of Utsira are more than twice that of an average municipality. Most of this can be related to demographic circumstances. The share of elderly people in almost all of these ten municipalities is considerably higher than the Norwegian average; these

Figure 3.22. **Ten municipalities that benefit most in relative terms from equalisation system (NOK per inhabitant; 2005)**



Source: Calculations by the OECD Secretariat based on data provided by KS and Statistics Norway.

elderly people do not work and their average income is lower. As a result, the income tax revenues are lower and the expenditure needs connected to health and social care are higher. Remoteness also adds to the costs of public services, and is weighted in to the expenditure needs equalisation.

The grant for remote areas constitutes an important source of revenue for the ten municipalities concerned as well as many other small municipalities. This grant alone constitutes 17% of the total revenues of the municipality of Utsira. As Table 3.2 shows, the remote regions grant in combination with the grant for North Norway provides some municipalities with more than a fifth of their revenues and is in some cases more substantial than income tax revenues.

Table 3.2. Revenue sources of the municipality of Loppa in the county of Finnmark (2004); in percentages of total revenues

Revenue sources	% (2004)
General grant	55
Expenditure needs equalisation	19
Remote regions grant	11
North Norway grant	10
Tax equalisation	8
Discretionary grant	6
Income tax revenues	17
Earmarked grant	15
Fees and charges	4
Other income	10
Total revenues	100

Source: Database Statistics Norway.

Substantial amounts of revenue are transferred through the equalisation system: from large cities to small municipalities, from urban counties to rural counties and from the south of Norway to the north. In the sections above, much attention is given to the extremes. In these cases the different elements of the equalisation system usually work in tandem: the biggest contributors are municipalities with below average expenditure needs, above average tax capacity and they do not receive regional grants. The municipalities that benefit the most show the exact opposite: they have below average tax capacities, above average expenditure needs and they receive regional grants.

The municipalities that are in between them show outcomes in which the different elements do not always act in tandem. Municipalities can contribute to one element of the system but benefit from another. There were 83 municipalities in 2005 that contributed to tax capacity equalisation and 93 that contributed to expenditure needs equalisation, but there were only

35 that contributed to both. An example of a municipality that contributed to one element but benefited from the other is Bodø, in Nordland: it contributed NOK 110 million to the expenditure needs equalisation system, but received NOK 24 million from the tax equalisation scheme. An interesting position is that of the largest cities in North Norway. Both Tromsø and Bodø would have been large contributors to the equalisation system if there were not the regional grant. They both have expenditure needs that are much lower than average. Hammerfest (Finnmark) even has above-average tax capacity and below-average expenditure needs, but thanks to the regional grant benefits from the equalisation system.

Evaluation of the equalisation system

Equalisation schemes are by definition intended to compensate for certain factors that distort either local government tax revenue or expenses. In the case of Norway, like in many OECD countries, both aspects are taken into consideration. Besides, the mechanisms amount to deliberate over-compensation of North Norway. As one of the regional policy goals is to keep North Norway populated, equalisation plays a substantial role in providing possibilities for additional or better services in that part of the country, that are thus at least partially financed by Oslo and other large cities. In the sense that such an equalisation scheme contributes to regional policy, it can be considered effective. Whether regional policy goals are fully attained through such a scheme, whether supplementary or even better services do effectively retain the population is another matter.

Special mention should be given to the position of the larger cities in North Norway. Although their fiscal position is relatively favourable (low expenditure needs, high tax bases) when compared to other municipalities in that part of the country, they continue to be big receivers of the equalisation scheme. A rationale for this might be their function as regional economic centres with positive spillover effects for the region as a whole. On the other hand, the support of larger cities in North Norway could drain resources from other cities that might be in a better position to compete globally. Northern cities also attract many citizens from small adjacent municipalities, so government support, in a regional growth pole logic, might have actually accelerated depopulation of remote areas. The position of cities in North Norway differs from small municipalities in the area (economies of scale, population growth). It would make sense to take these differences into account when allocating the grant for North Norway.

Should an equalisation system be an instrument for regional policy? As the regional grant elements are distinguished from the expenditure needs equalisation – and not interwoven in its criteria – there is a certain amount of transparency as to what regular equalisation is and what regional policy is. In

comparison with many other OECD countries, Norway has a relatively simple equalisation scheme that is presented in a clear manner in public documents, so that it is relatively easy to see who gets what and for what reason. A less transparent element is obviously the discretionary part of the general grant; although it is making up a considerable part of the equalisation scheme, it rarely transforms a contributing municipality into a benefiting one (nor the other way around). It thus seems to confirm existing patterns, rather than make a real difference.

Although the equalisation scheme seems favourable to municipalities in North Norway and remote areas, there are elements in the system that complicate stable medium term revenue flows. One of these elements is that changes with respect to the criteria (demographic indicators for instance) are immediately translated into the grant. In small municipalities with fixed costs for many services and a continuously declining population this can be a problem, especially if the municipality is to a large extent dependent on the general grant as a source of municipal income. Steigen (Nordland) considered as typical of many Norwegian remote municipalities, has experienced these sudden cuts, in 2006 for schools, as the headcount is going down but fixed costs, by definition, remain. Stronger safeguard mechanisms could have been introduced to prevent such a situation.

Many of the issues mentioned above have been studied by the Borge Commission that produced a report on the equalisation system in 2005. One of its main achievements was to give an estimation of where further economies of could be achieved, by looking at the travelling time between municipalities. When travelling time was relatively long, it was assumed that fewer economies could be reaped by co-operation or amalgamation. In these situations, the commission considered it to be justified to assume higher expenditure needs. In cases where travelling time was acceptably short to reap further benefits from co-operation or amalgamation it was argued that local governments should not be compensated for remoteness. Using this line of argument, the Borge commission came up with a proposal for new allocation criteria for the equalisation system. The application of these new criteria would result in a reduction of money flows to North Norway while Oslo and its surrounding municipalities would be the beneficiaries of the new equalisation criteria. Another commission installed in 2006 is reviewing the matter and its report on this delicate issue is to be finalised in 2008.

3.4. Vertical and horizontal co-ordination

3.4.1. Vertical co-ordination

As a general rule, Storting has stated that county borders should be used as a geographical delimitation of central government regional organisation.

More systematic use of these boundaries would certainly make co-ordination easier, particularly for the county governor now dealing with administrations and agencies the territorial limits of which are quite variable. However, during the last decade co-ordination has to some extent been facilitated as some central government actor's regional representation has been moved inside the county governor's office. In 2003, the national education office and the chief county medical office were integrated with the county governor's office. Today, regional branches of ministries and agencies covering employment matters, social insurance, consumer issues, tax administration and innovation policy are organised along county borders but an increasing number of other bodies are organised along different models.

This is due to the fact that development over the last decade has been towards larger regional units, rendering county borders less important in this respect. Since 1997, 29 agencies have changed their organisation on the regional level. Previously, county borders were the main regional distribution for central government actors but the case now is quite the opposite. At present, there are about 40 separate state authorities with a regional representation and only 7 out of these use counties for their regional organisation. The regional organisation of agencies spans a range of only 2 to up to a maximum of 27 and most agencies have approximately 5-6 regional units on average. One obvious example of larger scales for regional units is the establishment of the five regional health enterprises in 2002, but also in other areas do larger regional units such as these exist: there are five regional offices for management of government property, and six regional branches for customs, financial management and jury courts. Only in the case of the police do smaller regional entities exist: there are 27 police districts. Different regional boundaries make it more and more difficult to co-ordinate the different policy fields within a certain area and pose increasing co-ordination challenges to the governor's office.

This complexity is increased by the fact that certain regional agencies have tasks that are at least partially overlapping, even if within a given policy area there is a certain degree of specialisation. This is the case for innovation policy and entrepreneurship, which are covered by Innovation Norway, as well as the Industrial Development Corporation of Norway (SIVA) and the Research Council of Norway (RCN). They are co-ordinated by different ministries (RCN by the Ministry of Education and Research, Innovation Norway and SIVA by the Ministry of Trade and Industry) and have a different number of regional branches (Innovation Norway has 18 regional units, RCN eight regional representatives). This makes co-ordination of regional policies within the field of innovation and entrepreneurship even more difficult. It is also essential to provide the basis for improved regional co-ordination, with a clear cut set of

responsibilities in different bodies within the same territory. The opportunity might arise through future regional reform (see further).

Bigger municipalities, like Oslo, have bilateral contacts with the central government, but most municipalities communicate to the central government usually via KS, the Norwegian Association of Regional and Local Authorities (see Box 3.5). KS constitutes a channel through which local government in Norway expresses its concerns to the national government and participates in policy definition. It is engaged in regular consultation rounds by the central government. KS is consulted on the budget that concerns municipalities and municipal tasks, as well as major policy issues that have consequences for county and municipal government.

Box 3.5. Norwegian Association of Local and Regional Authorities (KS)

The Norwegian Association of Local and Regional Authorities (KS) is a national association regrouping all municipalities and counties but also public enterprises under municipal or county ownership. The latter are regrouped within a specific association comprising 435 members: the Norwegian Association of Regional and Local Enterprises (NaLRA). KS is also an employer's organisation, an advisory and consultative body, acting as a spokesman and advocate *vis-à-vis* central government on behalf of its members. The headquarters are in Oslo; the organisation maintains 17 offices across Norway (nearly one in each county). It is staffed by around 240 people and the budget amounted to NOK 200 million in 2006.

The organisation is regularly consulted by both government and Storting. The Association of Local and Regional Authorities also provides services in many different fields to its members. It has an education and training unit that helps local government officials and employees to enhance their level of qualification, by providing various courses and seminars. It has a division that provides services to locally owned public enterprises, such as specialised courses and conferences for individual companies or members within a specific industry branch. In addition, KS has a legal department of twelve lawyers that offers legal advice to all its members.

Source: www.ks.no.

3.4.2. Horizontal co-operation

Inter-ministerial co-ordination

For the Ministry of Local Government and Regional Development to play its leading role by ensuring coherence of regional development policy with

sector policies, proper co-ordination at the national level is required. This co-ordination has been carried out in a pragmatic way, with no formal mechanism intervening in this area until recently. As the Council of Ministers is collectively responsible for all government decisions, all ministries in a way have an incentive to achieve agreements with other ministries. Many inter-ministerial working groups, committees and action plans provide a framework for horizontal co-operation aiming to achieve this way adequate consensus, but those established on a permanent basis are fewer. In the field of regional development, such a permanent co-ordinating body was set up only at the end of 2005, with the creation of the Government Sub-committee on Rural and Regional Policy (see Box 3.6).

Box 3.6. **Government Sub-committee on Rural and Regional Policy**

A broad spectrum of actors has responsibilities for reaching Norway's regional policy goals. To facilitate better co-operation among these actors, the government established a permanent sub-committee on rural and regional policy in 2005. Only very few permanent committees like this exist in the country, signalling the importance of this issue. The committee is chaired by the Ministry of Local Government and Regional Development and brings together in total seven ministries with sectoral involvement in regional development.

The seven ministries are the following: Local Government and Regional Development; Government Administration and Reform; Agriculture; Fisheries and Coastal Affairs; Culture and Church Affairs; Industry and Trade and the Ministry of Transport and Communication. As the committee has only recently been established, it is too early to provide an assessment of its achievements. However, as territorial development is by essence cross-sector and that administrative boundaries within the country are diverse, the fact that such a committee has been created is undeniably a step forward in more efficient co-ordination at the central level that can only have positive spill-over effects towards counties and municipalities.

Source: OECD, based on information provided by the Ministry of Local Government and Regional Development.

Intermunicipal co-operation

Intermunicipal co-operation is frequent in Norway. A survey of 347 municipalities conducted by the Ministry of Local Government and Regional Development in 2004, shows that 96.7% of the municipalities co-operate with one or several other municipalities. (There are 431 municipalities

in Norway in 2007). The number of co-operative agreements per municipality (see Table 3.3) varies between 1-14 (average 4.9). The five most important areas of co-operation are waste disposal (88.7%), waste collection (79.4%), purchasing (63.9%), protection against fires (48.7%) and ICTs (33.4%). The most important areas of co-operation are therefore in technical, administrative and support functions. Less co-operation occurs for example in childcare (1.8%) and care/centres for the elderly (0%).

Table 3.3. **Fields of intermunicipal co-operation in 2006**

	Intermunicipal co-operation (%)	Number of municipalities
Waste disposal	88.7	337
Waste collection	79.4	340
Purchases	63.9	327
Fire protection	48.7	341
ICTs	33.4	332
Archives,	23.0	335
Research/evaluations	21.6	315
Water supplies	20.8	341
Sewage	15.9	339

Source: Ministry of Local Government and Regional Development.

The Ministry of Local Government and Regional Development financially supports innovative projects to develop intermunicipal co-operation. The government can also suggest to municipalities intermunicipal co-operative arrangements, as a condition for receiving certain types of financial support from the central government, such as discretionary grants. A recent example is that of the “Co-municipality” of Innherred, between Levanger and Verdal (North Trondelag). The two municipalities decided to bring together their authority in the areas of the environment, agriculture, planning and building services, land management and health and social services. Funding of NOK 1.5 million was awarded in 2004 for the four-year project that could well lead to a full merger.

New possibilities of intermunicipal co-operation have recently been opened up. In December 2006, the Local Government Act of 1992 was amended to widen the range of tasks that can be delegated from municipalities and county councils to intermunicipal co-operative bodies. The municipalities can now delegate certain tasks and responsibilities to another municipality, the “host municipality”. The model does not imply establishing a new public body; instead it is a co-operation based on a legally binding agreement between two or more municipalities. For this co-operative arrangement a written agreement is mandatory. Depending on the character of the delegated tasks, a political body has to be set up where all the

participating municipalities can be represented. The financing of the delegated task is subject to negotiation between the host municipality and the others.

Co-operation between municipalities seldom leads to amalgamations, based on voluntary agreements, in the absence of strong incentives. Since 1995, there have been 4 mergers and one is scheduled for 2008 (see Table 3.4). These mergers have taken place both in the north, west and in the area surrounding Oslo. The equalisation system is at best neutral from this point of view and can even contribute to maintaining small municipalities. The grant for remote areas is a lump sum per municipality and thus provides a disincentive to merge. The equalisation scheme does however provide an advantage in a transition phase which cushions the immediate financial loss that would otherwise result from merging. During a period of ten years after the merger, the merged municipality is entitled to receive the same amount of general grants as each of the former municipalities did. In the five subsequent years, the municipality is integrated into the regular equalisation system.

Table 3.4. **Municipal amalgamations since 1995**

Municipalities	County	Approximate population	Date of merger
Valer and Ramnes	Vestfold	4 000 + 4 000	1/1/2002
Bodø and Skjerstad	Nordland	40 000 + 1 000	1/1/2005
Olen and Vindafjord	Rogaland	4 700 + 3 400	1/1/2006
Aure and Tustna	More and Romsdal	2 600 + 1 000	1/1/2006
Kristiansund and Frei	More and Romsdal	17 000 + 5 000	1/1/2008

Source: Based on information provided by the Ministry of Local Government and Regional Development.

The Ministry of Local Government and Regional Development and KS invited municipalities in 2003 to a project where the municipalities were encouraged to assess their role and ability to fulfil their tasks, and to address the question of whether they would be in a better position to serve their citizens if they were merged or established other forms of co-operation with neighbouring municipalities. 25% of the municipalities considered the present borders as satisfactory, 53% municipalities saw the need of increased intermunicipality co-operation, and 21% of the municipalities wanted to investigate a further merging, meaning that 75% of the municipalities did not consider *status quo* as an alternative. Around 50% preferred intermunicipal co-operation to amalgamation, meaning that close to 50% would seem willing to proceed with a merger, which is quite remarkable. It should however be noted that these results might be influenced by fears of some municipalities that positive attitudes to amalgamation might provoke reform in this area. Although Parliament is formally responsible for the geographical division

between municipalities, the way forward that has been chosen to amalgamate municipalities is wisely a voluntary approach.

To help lay the foundations for possible amalgamations in the future, the government has made study grants available for municipalities that want to investigate the possibilities of amalgamation. At present, 30 municipalities have applied for this kind of grant. The 30 municipalities will, in groupings of two to six, evaluate possible amalgamation that would create 11 new larger municipalities. These municipalities are mostly located in the middle of Norway (in the counties of Oppland, Hedmark and Akershus). In six of the cases at least one of the municipalities participating has less than 5 000 inhabitants. The number of inhabitants of the new municipalities to be created is between 5 000 inhabitants and 46 000 inhabitants. The differences in tax capacity of the municipalities is remarkable: in every case there is at least one municipality with tax capacity considerably below average and another municipality with close to average or above-average tax capacity. In eight of the eleven cases, it is the smallest municipality that has the lowest tax capacity. This suggests the following underlying logic: the bigger municipalities do not have a problem in merging as they can provide the same kind of services without many extra marginal costs; the smaller municipalities are willing to merge when pooling resources is profitable to them and gives access to better services or a wider range of services.

Summing up, looking at the size of municipalities in Norway, there is definitely room for up scaling. Many municipalities have too few inhabitants to be able to provide adequately certain public services, if only for lack of skilled personnel, as analysed in Section 2.4. More than three quarters of the Norwegian municipalities have less than 10 000 inhabitants and many OECD countries have far larger municipalities in this respect. There are in Norway many intermunicipal co-operative arrangements, indicating the need for achieving a higher scale. Thirty municipalities are currently seriously considering amalgamation; if this is implemented the biggest reduction in municipalities since 1965 will be achieved.

On the other hand, even if municipalities are admittedly quite small in terms of population, at the same time, particularly in North Norway, their territory is large. When it comes to surface per municipality, Norwegian municipalities are among the largest within the OECD. Although the costs of certain local services could be reduced when these are accessed by a wider population segment, big distances between municipalities pose a certain limit to economies of scale that can be achieved. Moreover, amalgamation is not necessarily more efficient than intermunicipal co-operation in order to reap economies of scale. Considering the extent to which municipalities already co-operate, increased municipal amalgamation could only partially make sense in the Norwegian context in terms of better efficiency. On the other

hand it should be underlined that amalgamation increases accountability, as compared to co-operative agreements over which citizens have little control.

Interregional (inter-county) co-operation

In Norway, co-operation also exists at the county level. The oldest co-operative arrangement is that of the four northernmost counties, created in the 1970s. The organisation created for this co-operation is the Executive Committee for North Norway and Nord-Trøndelag (ECNN). Similar organisations have been created in Western Norway in 2003 (four counties) and Eastern Norway in 1993 (eight counties). The Regional Council for Western Norway consists of the counties of Rogaland, Hordaland, Sogn og Fjordane and More og Romsdal. The Eastern Norway County Network (ENCN) comprises the following members: Ostfold, Akershus, Oslo, Hedmark, Oppland, Buskerud, Vestfold and Telemark.

There are many similarities between these co-operative arrangements in terms of organisation, funding and functions. The costs of these inter-county arrangements are covered by the counties themselves. Arrangements aim at representing the interests of the region *vis-à-vis* the national government and in international forums. They have goals with respect to regional development, which differ according to the region concerned. The Executive Committee for North Norway is involved in oil and gas issues, whereas the Regional Council for Western Norway has launched policies to develop fish farming.

In certain policy areas concrete progress and effective results have been achieved on the basis of these co-operative arrangements. The Eastern Norway County Network managed to achieve more coherence in the regional public transportation network. The adoption of a “Vision for public transportation in 2015” led to various measures: different information systems for public transportation are being harmonised and a joint ticketing service is being implemented. In other cases, co-operative arrangements of this type have helped to consolidate regional demands for additional funds, as the Regional Council for Western Norway did with respect to a national road along the western coast of Norway, subsidies for the fish farming industry and a common transport plan. Lastly, business development and international co-operation are also featured.

3.4.3. Multilevel governance challenges

The delivery of regional policy

In Norway, the delivery of policy often sees roles shared rather than divided between different levels of government. Policies are often implemented by national authorities or agencies together with municipality

or county authorities. The regional dimension has however gained more weight in Norway in recent years.⁵ The most significant example of this in the regional policy field was the transfer in 2003 of 80% of the regional policy budget (relating to regional aid) from the Ministry of Local Government and Regional Development to the county level (instead of being channelled through Innovation Norway). As leaders of county-level partnerships, the counties became responsible for deciding how these financial resources should be allocated. In this context, regional plans and regional strategies have become more central to regional policy implementation.

There are three main levels involved in the delivery of regional policy – the national policy development level; the national/regional (county) policy implementation level and the municipal implementation level. At the national level, the Ministry of Local Government and Regional Development is responsible for developing and overseeing policy related to regional development. In this role, it has the task of identifying the geographical target areas for policy (as discussed in Section 2.2) and for negotiating and agreeing the designated regional aid maps with the EFTA Surveillance Authority (ESA).⁶ It also indicates development priorities (job creation, entrepreneurship, innovation, start-up support), though not in a detailed prescriptive way, and determines the funding split between those regional development measures delivered through Innovation Norway (mainly innovation-oriented support) and the devolved regional aid budget. Limited funding is retained to finance projects and smaller programmes (often of a pilot nature) administered directly by the ministry.

The policies of other ministries also have regional development effects, albeit in a less explicitly targeted way. In addition to those ministries represented permanently on the advisory sub-committee of government, the Ministries of Health, Education and Labour operate policies with clear regional impacts. The Effects Committee (NOU, 2004a), which reported in 2004, was set up to consider the economic contribution of sectoral policies to the development of the districts. It concluded that this had been falling as a result of market liberalisation and related developments. It argued that the effects of all national policies would be enhanced were regional policy to be co-ordinated more effectively across all policy areas. Notwithstanding the subsequent establishment of the new Government Sub-committee on Rural and Regional Policy – and also recognising the ongoing co-operation which takes place between ministries while developing programmes and evaluating policies – cross-sectoral co-ordination remains a significant regional policy challenge.

Policy implementation in Norway is often channelled through national agencies. In the industrial development context, there are three main agencies involved, all of which have regional offices – Innovation Norway, the Norwegian Research Council and SIVA (Section 2.3). They operate within a

framework of political and administrative decisions at the government level which determines objectives, strategies, priorities, targets and budgets. These are specified in annual letters of award to the three agencies from each of their sponsoring ministries, in particular the Ministries of Trade and Industry, Education, Local Government and Regional Development, Agriculture and Food, and Fisheries and Coastal Affairs. Each year, the agencies have to report back on activities and achievements and periodic evaluations are also undertaken. Although they have different mandates, there is close co-operation between the three agencies.

The 2003 decentralisation reform gave counties more regional development responsibilities.⁷ Their role as regional development stakeholders was enhanced, changing them from simple implementers of policy to key drivers of regional development on the basis of the needs identified by them and the strategies decided at their level. In particular, counties became responsible for drawing up County Development Plans bringing together the sector strategies of different ministries while taking the lead in the production and implementation of regional development plans based on the use of funds now delegated to them. The county, its constituent municipalities, the business/private sector, development agencies (including Innovation Norway) and academic institutions were charged with working in partnership to further sustainable regional development through such plans.

Similar to the approach taken with respect to Innovation Norway, the counties receive individual award letters each year from the Ministry of Local Government and Regional Development which set down new targets to be taken into account, together with available budgetary resources. Within this framework, counties can determine specific objectives, strategic priorities and operational approaches. A report of the priorities adopted and results obtained is subsequently submitted to the ministry, essentially for information purposes. Although regional development plans initially had to be endorsed by the ministry, they are now part of the ordinary planning process of the counties and involve little national-level feedback. The role of the ministry is thus one of facilitation rather than co-ordination. At the time of the decentralisation reform, the minister was keen to ensure that the counties were given as much freedom as possible with respect to their regional development actions. In line with this, there is no competitive element to the funding, nor are there any negative implications if the funding is not thought to have been adequately spent.⁸ This approach contrasts with that adopted by a range of EU countries (see Box 3.7) where the national level has generally been keen to co-ordinate regional-level developments.

Notwithstanding these developments, the county level is not clearly perceived in terms of its legitimacy, vigour and competence. The transfer of decisions concerning funding and the establishment of county partnerships

Box 3.7. Forms of national-regional co-ordination within selected EU member states

Informal mechanisms to encourage ongoing dialogue between the centre and the regions.

- In **Austria**, the Federal Chancellery, supported by the Austrian Conference on Spatial Planning (ÖROK), serves as a regional policy co-ordination body. The absence of a national legal framework for regional policy (which is a *Land*-level responsibility) means that policy co-ordination is consensus-based and informal.
- In **Sweden**, improved informal co-ordination lies at the core of the approach to regional policy, not least through the Regional Growth Programmes. Following improved co-ordination in the development of the 2007-13 NSRF (under EU cohesion policy), a national forum is to be set up to promote dialogue between regional and national representatives.

More formal rules-based and consensus-oriented co-ordination.

- In **Germany**, co-ordination between levels of government is formalised. Under the regional policy GA (*Gemeinschaftsaufgabe*), a joint federal-*Land* planning framework has been drawn up to co-ordinate regional policy interventions.

Co-ordination via the co-funding of programmes and projects.

- In **Denmark**, the recently established regional growth fora are partnership bodies which bring together local government, the private sector and knowledge institutions. The new fora are prohibited from implementing programmes themselves; instead, they require local and central government support, thus ensuring a co-ordinated approach.
- In **France**, DIACT, the agency in charge of territorial development, plays an important co-ordination role through its co-funding activities. It also functions as the main partner of the regions in developing and implementing state-region planning contracts (CPER).

Feeding national priorities into regional programmes and regional priorities into national budgets.

- In **the UK**, English Regional Development Agencies (RDAs) must show how they will address the priorities set out in their regional economic strategies whilst also contributing to the national-level public service agreement for improving regional economic performance. At the same time, RDAs provide national ministries with their budget plans in certain fields to facilitate better co-ordination with national financial planning.
- In **Finland**, the 2007 Regional Development Act aims to increase co-operation between central and regional levels by ensuring that sectoral ministries negotiate regional funding allocations with regional councils. At the same time, regional plans must integrate national policy goals.

Source: Yuill D, Responding to the Changing Policy Agenda: Recent Regional Policy Developments in the EU and Norway, EoRPA Paper 06/1, European Policies Research Centre, University of Strathclyde, 2006.

and regional development plans do not appear to have attained their initial goals. An evaluation in January 2005 (Knudsen, et al., 2005) concluded that many county authorities remained too weak to take advantage of their role as regional stakeholders. It took the view that counties would not be attractive regional partners until they gained more resources and institutional authority. The report also highlighted some of the perceived limitations of county partnerships. It concluded that, different from most of the EU, involvement in regional partnerships is seen as strategically unconditional and remains a case-by-case activity based on specific projects and initiatives; moreover, the embedding of the partnership principle was considered to be highly dependent on key individuals.⁹ The evaluation also considered that if county authorities were to mobilise partnerships to strengthen regional development, a further devolution of powers was required.

Reforming regional governance

A key driver for policy decentralisation in Norway was the “Responsibility Reform” initiated in 2003 following a White Paper on local democracy (St.meld.nr.19, 2001-2002). The objectives of regional reform were, first, to strengthen local and regional democracy through devolution, with power and competences redistributed from the state to regional councils; second, to create a clear division of labour between the different levels of government; third, to develop a more coherent and efficient public sector; fourth, to create value and employment based on local and regional strengths; and finally, to ensure the efficient management of national goals such as sustainable development, equivalent service provision across the country and the legal protection of the individual.

The reform process was taken further by the White Paper delivered in December 2006, which paves the way for future regional reform (St.meld.nr.12, 2006-2007). It agreed that there should, in the future, continue to be three levels of government. Beneath the national level, the regions/counties are to be central actors for regional development while the municipalities should remain the main providers of public services. Traditionally, municipalities have always had a relatively strong position within the Norwegian system while the role of counties has been far weaker. At present, the counties are responsible in particular for county planning (including co-ordination), upper secondary education, culture and heritage management as well as certain transport and industrial development functions. Upper secondary education is the most important of these activities in funding terms, with transport coming second. Following the White Paper, agreement will have to be reached as to what other tasks might be devolved to the regional/county level; only after this has been done will consideration be given to the appropriate number of regions/counties.

Possible new regional-level tasks include elements of regional spatial planning; the transfer of certain county governor tasks to the county;¹⁰ more transport infrastructure responsibilities (for instance certain national roads); more cultural tasks; enhanced R&D responsibilities (including basic funding of regional research institutes); involvement in the ownership of Innovation Norway; and perhaps also new regional innovation corporations (also known as “mini-SIVAs”). It remains to be seen what the final outcome will be: some movement may take place with respect to agriculture and environmental policies, where responsibilities may shift from the county governors to the new regional authorities. A key issue is likely to be whether the new regions will be given enhanced powers relating to infrastructure and industrial development, since these are key policy areas which involve significant budgets. A final decision is due in the course of 2007.

The construction in which an elected regional body and a central government’s representative in the region work together is common in many OECD countries. In many cases in Norway co-operation is close, with a certain blurring of roles. The county governor in Norway has a strong position in regional governance *vis-à-vis* the county council, more so than central governments’ regional representatives in many OECD countries. Devolution, such as indicated above, would bring Norway in line with trends in other OECD countries over the last decade, such as Spain and Italy where functions have been decentralised from national governments (or their representatives in the regions) to subnational government units. Pilots have also been started in Norway in which County authorities and the county governor’s office are merged into one single regional body (see Box 3.8). Although evaluation will have to show to what extent these experiences have been positive, the integration of both organisations can be an option to simplify co-ordination within the county.

As regards future geographical models, the White Paper reviewed three possibilities – a strengthened county model (involving 16-18 counties); a large-region model (with, perhaps, 5 to 7 regions); and an intermediate model (of 10 to 14 counties), now set aside, so the counties must now discuss the other two. If no agreement is reached, Parliament will take the final decision, with the new system expected to come into force in 2010. In considering the options, there are some factors which suggest that the large-region option may be difficult to apply. One is that certain counties have declared their unwillingness to become part of larger groups. Finnmark has already made this point and Oslo has also indicated that it does not want any entity (like a region) to come between itself and the state. Another is that there are very distinct identities from county to county in Norway; this may make it difficult for larger regions to operate effectively. Great distances and the size of future

Box 3.8. Pilots on governance in a single regional body

In 2004 two pilot projects aiming to implement a “unitary county” started in the counties of More og Romsdal and Hedmark, by integration of the County Governor’s Office with that of the County council. This new administrative body addresses traditional state responsibilities such as the review of legality and appeals supervision as well as providing public services and regional development support and measures.

Supervisory and appeals responsibility are however kept separate from the other responsibilities. The chief executive of the new entity can be either the County Governor or the Chief County Executive, leaving this important issue within the scope of a pragmatic approach that depends on the local political context, which can be quite different from one county to the other. The intention of the pilot is to find out whether a single administration helps to reduce bureaucratic duplication. The pilot projects will last until the end of 2008.

Source: Based on information provided by the Ministry of Local Government and Regional Development.

counties are other factors to bear in mind in trying to strike the best balance between economies of scale and territorial cohesion.

The Norwegian Association for Local and Regional Authorities (KS) has made a strong case for the large-region model, pointing to fragmentation in subnational government. While the county level previously dominated the division of the state subnationally, only seven out of 40 agencies are now arranged on county lines. Although the number of regional units varies between 2 and 17, most agencies operate with respect to 5 or 6 regions. KS further argues that value creation would be enhanced by a limited number of regions (around seven), allowing a more strategic approach to be adopted and facilitating the more effective utilisation of regional resources. Finally, larger regions are linked to arguments for strengthening regional democracy, creating a framework where more responsibilities can be transferred from the subnational representatives of the state to democratically elected regions.

The situation of Oslo is quite specific as the capital city renders services to a very wide region. Thus, when considering the spending patterns of the counties around Oslo, it seems that their inhabitants are making use of certain public services provided by Oslo. This is an indication that for certain services the functional area of Oslo benefits its surrounding counties. This would theoretically suggest merging them into one county corresponding to the city-region of Oslo. This would to some extent correspond to the Ostviken region that would be created in the case of a 7 or 9 region option being retained. In

the case of a five regions option, it would form only part of the larger entity created (Ostlandet). This brings forward the issue of an intermediate regional level that the capital city does not seem to favour. On the other hand, Oslo area issues could also be appropriately dealt with by increased co-operation in the functional urban area.

A White Paper on the capital region was presented to Parliament on 1 June 2007. Parliament had unanimously asked for this White Paper, in order to address the special challenges that the Oslo region has. These challenges include social-economic disparities, integration of immigrants, offering good living conditions and promoting innovation (see Chapter 2) in what is the prime economic engine of Norway. As many co-operative arrangements between the central government and Oslo municipality have been put in place, within areas such as transportation and housing, the White Paper addresses the question whether new forms of governance might be necessary in addition to co-operation, such as changing boundaries, or creating a special legal position for the capital region.

As other countries, Norway needs a strong metropolitan region to benefit the entire country. The White Paper demonstrates its strength in terms of different indicators and assessments. These show that the level of education and research is very high, that the dynamism of several industrial clusters is quite impressive and that the attractiveness of the region is significant in terms of leisure, culture and communication. On the other hand, these potentials do not appear to have been fully developed up to now. In particular, one of the fundamental challenges of the Oslo region is to find extended sources of growth from different regional clusters and the regional innovation system at large. Commercialisation and internationalisation need to be considered as key elements. The White Paper demonstrates the intention of defining a differentiated policy for the different regions of the country, integrating the metropolitan region as a natural part of regional policy. In order to achieve this, the rest of the country has to be more fully connected to enterprises and innovation clusters in the metropolitan region. Reciprocal internal spillovers need to be stimulated and connectivity to other Nordic metropolitan regions could be reinforced.

Discussions on the scale of regional government take place in many OECD countries and several other Nordic countries have or are going through similar processes. Denmark has recently gone through a regional reform which saw the 14 counties reduced to 5 regions, and both Sweden and Finland are considering reducing the number of regions in parallel to a strengthening of their role. The upscaling of counties certainly has some functional logic in the context of the stronger role in economic development that regional authorities are assuming in many countries. However, institutional reform always faces a trade off between increasing the functionality of regional

governance on one hand and transaction costs in order to get there on the other. The government is to present the reform to Storting in 2008 and launch it in 2010. In 2007, discussions are planned with counties and other actors on multilevel definition of tasks, boundaries and other elements.

E-government

Electronic government is frequently used as an instrument to improve public service delivery and it can well serve the particular situation of Norway. With many remote areas and low population densities, potential for economies of scale in service delivery in physical terms is limited. E-government services could then be a solution: Norway does relatively well in this area. In 2005, 95% of Norwegian households had broadband access (www.hoykom.no). The territorial digital divide in the country is small. The OECD E-Government Review of Norway (2005) showed that there was only an 8% difference in access between the capital region and other regions in 2001. Nevertheless, many difficulties remain. Full broadband access is difficult to achieve in remote areas. Elderly people (relatively overrepresented in remote areas) have by far the lowest access rate in Norway. Moreover, despite the fact that all schools are connected to the Internet, the use of computers is still limited: 13% of all students never use computers at school (OECD, 2005).

Norwegian broadband policy is based on the idea that roll-out should primarily be market-driven. With a few exceptions in remote areas where the market is less likely to support broadband infrastructure and applications, the Norwegian government does not fund infrastructure directly. In response to market conditions, many municipalities have used their local electricity companies to build access networks for public and private customers. The central government has supported many e-government projects through the Hoykom programme, started in 1999, that has provided financial support for more than 400 projects, with co-financing up to 50%. The 2005 budget of Hoykom, financed by the Ministry of Government Administration and Reform and the Ministry of Education and Research, was around EUR 10 million.

One of the main areas of support is the education sector. The policy plan "eNorway 2009" contains ambitious plans to increase digital access to libraries and cultural facilities. In the hospital sector, the decision to go for digital X-ray has given an impetus to investments. This interplay has however, according to the Norwegian research institute STEP,¹¹ led to reduced compatibility and a fragmented market. The networks of the hospitals have implemented their security and safety measures in other ways than local authorities, thus excluding local doctors from belonging to the state health net and the municipal health sector net at the same time (STEP, 2003). More intergovernmental co-ordination is here required.

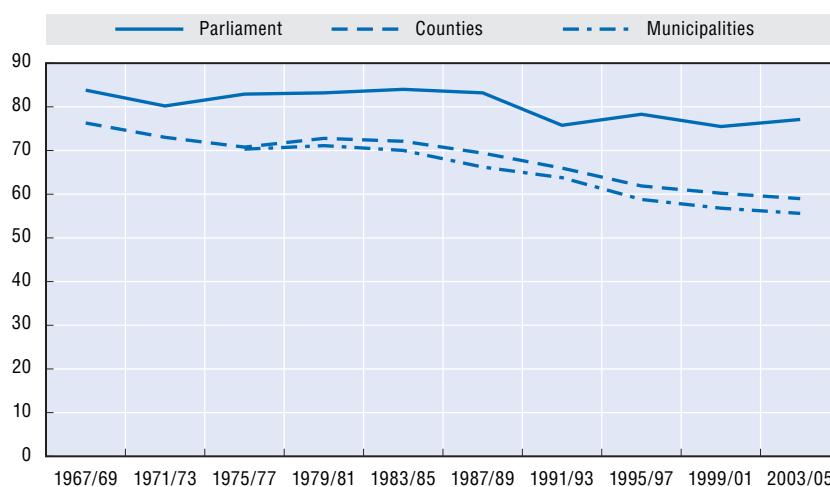
3.5. Citizen participation

Civic engagement and civil society can play an important role in territorial development at the local level, as the effects of different types of participation, whether in local elections, other participatory processes or through associations, can usually be witnessed in a tangible fashion in many aspects of everyday life. The framework and features of public services rendered at municipal or county level, the opportunities offered by cultural activities encouraged by local authorities or the creation of new jobs because of an attractive local business environment are but some examples of areas in which citizens within a community can have direct concern. This translates into voter turnout at the local level, local initiative or partnerships of different kinds. Also, the more developed social capital is, the more likely it is that entrepreneurship will develop and confidence in institutions will be positively rated.

3.5.1. Local elections

In Norway, as in other Nordic countries, there seems to be good trust of citizens in the political process. Voter turn-out is relatively high, with around 80% of the voters participating in the national elections and 65% in regional and local elections over the last three decades. However, turn out for national elections dropped very slightly over this period, whereas for regional and local elections participation rates have dropped more dramatically (see Figure 3.23). This shows a diminishing lack of concern in regional and local affairs at a time

Figure 3.23. **Voter turnout in national, county and municipal elections in Norway: 1967-2005**



Source: Statistics Norway.

when decentralisation in view of a major reform is being pushed. Will this perspective finally offer an opportunity for voters to associate more closely with regional and local issues? There is no clear-cut answer concerning these trends. A possible explanation relates to the fact that central level regulations limit local government initiative, hence the perception that participating in local elections does not weigh that much on outcomes that are pretty much decided elsewhere.

Proximity plays in favour of the municipality as compared to the county, it is thus not surprising that disaffection of voters is stronger in the latter than for the former, particularly since present powers of counties remain somewhat limited and are precisely at the centre of the debate concerning regional reform. Analysis of these trends at the municipal level¹² brings forward some interesting findings. In particular, differences between municipalities in voter turn-out in municipal elections have increased in recent years. In small municipalities, participation in these elections has not declined strongly in all cases and it has actually increased in a certain number of these when looking at the post-war period as a whole. Detailed analysis of these cases could reveal voter motivations in a given context, thus contributing to better understanding the factors determining positive responses to participation in the electoral process.

3.5.2. Participatory processes

Many processes have been established in Norway to ensure effective consultation of the population before a decision is taken by local authorities or a project is launched. The Norwegian Planning and Building Act of 1985 integrates such concerns. It puts weight on information and inhabitants' right to comment and offer opinions on various types of urban plans: master plans, the land use part of master plans, zoning plans in particular. The Norwegian Local Government Act of 1992 opened the possibility of user representation in welfare institution boards and this practice is today well-established. Local referenda are also widely developed: between 1970 and 2000, 514 consultations of this type have been carried out on a wide spectrum of subjects: liquor licenses,¹³ use of different languages in schools,¹⁴ and municipal merging. The Norwegian Local Government Act of 1992 recognises a right of citizen initiative that was precisely defined for local affairs in the amended Act of 2003, in its paragraph 39a relating to "inhabitant's initiative" (see Box 3.9).

New trends and mechanisms in participatory processes can be viewed from different angles. Some observers tend to consider that these developments translate a weakening of classical democratic principles and even accentuate the phenomenon. Such is the case of the research project "Power and Democracy"¹⁵ concluded in 2003. On the other hand, the 2006 report "Local Democracy in Change"¹⁶ concludes that case oriented or business-based

Box 3.9. “Inhabitant Initiative in Norway”

1. The municipal council or the county council has a duty to consider and make a decision on a proposal concerning the activity of the municipal authority or of the county authority, if no less than 2% of the inhabitants, or alternatively 300 in the municipal authority area or 500 in the county, are behind the proposal.
2. The municipal council or the county council shall make a decision on the proposal no later than 6 months after it has been put forward. Those inhabitants who are behind the initiative shall be informed of the decisions made and the measures to be implemented as a result of the proposal.
3. A proposal with the same content may not be put forward more than once in the course of the same electoral term. Nor may a proposal be submitted again until four years have elapsed since the proposal was last submitted.
4. Where a proposal that has been put forward in pursuance of the provisions of this section is voted down in the municipal council or the county council, there is no right of appeal unless this follows from other provisions.

Source: Local Government Act, 2003.

political involvement is not necessarily in opposition to political work within the framework of representative (local) democracy. The report even considers that municipalities face a challenge in channelling individual engagement into representative decision-making processes. In discussing ways to develop and renew local democracy the report focuses also on the Internet. It considers that local web forums are not necessarily an alternative participation channel, but rather contribute to strengthen representative local democracy.

3.5.3. Entrepreneurship

The private sector is by definition a major actor in local development that the state seeks to consolidate in all parts of the country by helping to create a favourable business environment and providing adequate financial and often fiscal support to new businesses, taking into account local circumstances. In Norway, this supporting role of national authorities has recently been extended to education in entrepreneurship at a very early stage, recognising that entrepreneurship culture is crucial to foster economic growth, to create employment in all areas, to integrate immigrants in the labour market, and to develop innovation. The Ministries of Education, Trade and Industry, and of Local Government and Regional Development developed together an

ambitious Strategic Plan called “See opportunities and make them work” covering 2004-2008. The most innovative aspects relate to the fact that the strategy covers the school system from primary to upper secondary and up to college and university, including teacher training and that it also integrates territorial development concerns.

The strategy aims “to motivate and inspire educational institutions, municipalities and counties to plan and firmly establish training in entrepreneurship in collaboration with trade and industry and other relevant stakeholders in the local environment”. At all levels of education, the aims are to unleash creative skills, develop self-confidence and stimulate risk taking, directly conducive to entrepreneurship. In pursuing these goals, emphasis is put on “understanding the cultural and economic resources in the local community”, on “utilising resources and exploiting opportunities locally”. In line with these aims, the new curriculum for primary, lower secondary and upper secondary education and training (Culture for Learning) was introduced in 2006, using entrepreneurship as an instrument to renew education. The territorial dimension is underlined by reference to the prerequisite of collaboration between schools and the local business sector. The need for more arenas for contact between the different players is recognised, not only within the direct aims of the reform but also to strengthen recruitment to the local business sector.

One of the main private sector partners in this venture is “Junior Achievement – Young Enterprise Norway”, founded in 1997, dedicated to training in business skills for pupils and students at all ages that maintains local branches in all counties. It offers a variety of programmes like Pupils Enterprise and Enterprise in action (13-15-year-olds), Company programme (15-19-year-olds), Graduate programme (19+), and also Introductory Enterprise (Immigrants and refugees). In the school year ending 2005, 9 000 students from upper secondary school took part in the company programmes, and 7 000 students participated in “Pupil enterprises”. These efforts stepped up for 2005-2006: 12 000 pupils took part in 1 900 enterprises in 300 upper secondary schools all over the country, while 3 000 teachers participated in training courses. A 2002 study shows that 20% of the students benefiting from the programmes later started their own business, as compared to a national average of 4%.

Partnerships to further these goals have been developing between the educational sector in counties and the private sector, with the support of NHO (Confederation of Norwegian Enterprise). All told, more than 3 500 partnership agreements have been signed up to this day. Around 75% of lower secondary schools have entered into such agreements. Broader partnerships at the county level, integrated into the strategic plans for regional development, bring together all the actors concerned: institutions at different levels of

education, public agencies and representatives of the private sector. A survey among teachers at the lower secondary level conducted in 2004 precisely established that collaboration between business and educational institutions was the main achievement of the strategy. It is as of now too early to evaluate with precision the overall impact of the strategy but it undeniably constitutes a step in the right direction, as one of the main challenges of the educational system in Norway is to better attune its outputs to labour market needs in very different parts of the country.

3.5.4. Civil society

Civil society plays an important role in Norwegian governance. The sector is well developed and adhered to by large shares of the Norwegian population. In the Johns Hopkins Global Civil Society index Norway scores second out of 34 countries. Norway has a particularly high score on the ability of civil society to survive over time and above-average on the level of effort the sector mobilises and the impact it has on social, economic and political life. Norway has a relatively low share of civil society workforce (2.7% of the economically active population in 2004), but makes up for that by a large share of volunteers (4.4% of the economically active population) (Salomon and Sokolowski, 2004).

Civil society organisations played an important role in Norwegian history and continue to exert influence. Labour unions and rural organisations had a substantial influence on the evolution of democracy in Norway. NGO's worked to strengthen women's rights and labour rights. In the last decades many were engaged in environmental issues, international aid and development, as well as the issue of Norwegian membership in the EU (referenda in 1972 and 1994). Around one-fourth of Norwegian development aid is channelled through NGO's. Labour unions continue to be powerful organisations with high membership and substantial influence over wage setting. Three out of four Norwegians are members of at least one NGO and half of the population is member of two or more organisations (www.norway.org).

It is useful to refer to the concept of social capital to apprehend the role of civil society in local development matters. Social capital resides in the relations and network of persons, with value lying in the type and feature of the network (Coleman, 1990; Magliola, 2005). In a regional setting, studies by Putnam and colleagues in Italy between 1970 and 1990 (Putnam, 1993) defined social capital as "norms of reciprocity and networks of civic engagement". Social capital facilitates contact between inhabitants, authorities and politicians making development of legitimate and effective solutions easier and less costly. There are few direct studies of social capital in Norwegian regions, but following Putnam's definitions, Norway and the Nordic countries score high.

A comparative study of new co-operatives in Trøndelag and Jämtland in 1997 showed that such organisations solved important tasks, in the former region first within agriculture, in the latter region mostly within services and care (Forbord, 1998). A recent study from Sweden suggests that high activity in voluntary organisations may be positive for population growth in rural communities (Westlund, 2006). This may be an indicator of the importance of social capital for rural and regional development. The building of networks is important for developing new economic activity in rural areas as well (Forbord, 2005). This corresponds to recent studies in Denmark showing that social capital is a “profitable asset” saving society of enormous costs, when it comes to control (Svendensen and Svendensen, 2006). As such, social capital represents an essential resource because it “produces” public institutions that people are satisfied with and more developed regions in terms of socio-economic factors.

3.6. Future developments

Regional reform is on the top of the policy agenda in Norway. In many countries, regional reform is about decentralising responsibilities to the regional level. This is of course one of the features of proposed reform in Norway but debate relates to many other aspects, either directly or indirectly. The major issue is searching for increased efficiency in the delivery of regional development policy in the whole country and particularly in the many areas where very low density settlement patterns and out-migration constitute a major challenge to policy makers. Maintaining the vitality of these areas, in particular by continued quality public services and strong central support for economic development, is a shared objective of Norwegian society and the body politic as a whole. Through which multilevel governance arrangements can this goal, and more broadly, that of balanced territorial development, be met? In summarising the findings of this review, this last section will seek to highlight the linkages between different issues and their implications.

The issue of increased powers delegated to regions is inseparable from that of the size and number of regions. In Norway, the choices that will be made will have to take into account specific constraints that seldom arise elsewhere. Big regions respond to the issues of critical mass but in the case of Norway low population density and distances seem to plead in favour of medium-sized regions, meaning that the present number of 19 counties cannot easily be reduced to a mere five or seven. Where should the line be drawn? There is no optimal solution in itself but the final choice must in all cases organise coherence in the distribution of roles between different government levels. If the central level delegates new areas of authority to counties, the latter should have effective responsibility in terms of regional decision making and implementation. This brings up the issue of integrating

specific regional concerns into national policy delivery. The county governor's role will necessarily change: strong co-ordination and *ex post* control should progressively replace the more direct role played today.

Regional reform cannot be separated from the challenges relating to the evolution of municipalities, their size and number and their overall role. Municipalities in Norway play an essential role in terms of public service delivery but they also contribute to local economic development. Many municipalities today lack critical mass, not so much in budgetary terms, because of the effectiveness of the equalisation system that integrates local conditions in a generally well targeted way, but in terms of skilled personnel. Increased inter-municipal co-operation or even merging in certain cases would permit to better pool scant resources but can reinforced municipalities coexist with more powerful regions? If there is a clear separation of roles there is no reason to believe that these two levels of local government cannot develop their action in a co-ordinated fashion. However, municipalities and counties in Norway are on an equal footing as there is no hierarchical relationship between them in any area. In practical terms, this might have to evolve in the future so that individual municipalities can effectively act as agents of regional development strategies rather than trying to pursue goals that do not necessarily fit into a wider picture.

Carrying regional reform forward supposes adequate understanding of the challenges by citizens whose ultimate support conditions future success. If new and more powerful regions are created but voters continue to vote less in regional elections than in national or even municipal elections, democracy will not have gained even if there is increased efficiency in terms of development processes. Future regions, depending on their delimitation, could run the risk of retaining less attention from citizens, situated as they are between the well understood role of the national level and the proximity role of the municipality in daily life. Explaining the crucial role of regions in terms of major infrastructure and economic development is thus paramount to the process itself. Also, new forms of participatory governance are emerging in many countries and this is particularly the case in Norway. Civil society is more and more engaged in local development processes, in particular through partnerships. It is essential to fully recognise the role of these new participatory expressions of governance, often developing through national and regional networks, rather than consider these as competing with more classical modes of citizen engagement.

On the long run, how can the Norwegian model of regional development evolve in a global era? Remote areas and North Norway have a special place in the equalisation system and in regional policy. The assumption is that the expenditure needs in these areas are larger than elsewhere, justifying a higher degree of dependency on national grants. This complex system is partly

financed by the high levels of national fiscal revenue thanks to petroleum resources, even if spending from this source is checked by pension fund mechanisms designed to safeguard the interests of future generations. The other major source of revenue for remote areas and North Norway are transfers within the equalisation system, most notably from Oslo and other large cities. Can the competitiveness of the capital-city region be maintained in the future, taking into account its essential role in the performance of the whole Norwegian economy, while adequately supporting lagging or remote regions? The answer probably lies in the understanding that regional policy is a whole and that emerging urban policy can contribute to its objectives.

Notes

1. There are 16 ministries in Norway, besides the Prime Minister's Office.
2. Oslo and Akershus have one county governor's office, thus 18 county governor's offices and 19 counties.
3. A slightly different picture emerges when median surface per municipality is compared. In that case Sweden and Iceland have larger municipalities and Finland smaller municipalities. See Neubauer, et al. (2007).
4. Municipalities manage to circumvent this rule: over 25% of 224 reviewed (1993-1998) had average user charge financing above 100% (Borge and Rattso, 2004).
5. Although this is true for regional policy (narrowly defined) there are exceptions to the rule like the 2001 reform of health care resulting in a shift of responsibilities from the county to the national level (see Chapter 3).
6. As a member of the European Economic Area (EEA), Norway is governed by regional aid guidelines which limit the form, value and location of aid awards. These guidelines correspond to the EU regional aid guidelines (see OJEU C54, 4 March 2006) which are overseen by DG Competition. For EEA members outside the EU, the state aid control role of DG Competition is undertaken by ESA.
7. This followed on from the 2001 health care reform which removed hospitals from county responsibility.
8. On the contrary, should the economic development situation worsen (as reflected in further depopulation, etc.) then, following the next area designation exercise, the likelihood is that the county would qualify for even more support.
9. On the other hand, others have found that a closer dialogue between politicians and the administration is developing at the county level and that partnership works most effectively between those making a financial contribution to it. See Bjørgum (2005).
10. The main role of the county governors is to help attain the government's objectives in the county. They act on behalf of some ministries to communicate and co-ordinate policies and they also have a supervisory role to ensure that policy delivery follows the established frameworks and is in line with municipal self-government principles. KS and the government agree that in the future the governor's role should be limited to inspection and control functions.
11. Now part of NIFU-STEP.

12. "Valgdeltakelsen ved kommunevalg: Bedre enn sitt rykte?" (Voter Turnout in Municipal Council Elections: Better than its Reputation), in NOU (2006).
13. In Norway retail distribution of wine and spirits is a state monopoly.
14. Use of either Bokmal or Nynorsk in schools is decided by the local population, with the "secondary" language referred to for printed material only.
15. Research project launched by the government of Norway in 1998 and chaired by Professor Oyvind Osterud, Department of Political Science, University of Oslo.
16. The report will be followed by a White Paper to Parliament, mid-2007.

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Statistics Norway: www.ssb.no

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Norway has successfully developed a resource-based economy (hydroelectricity, petroleum, fisheries, agriculture) and is also competitive in specific sectors of the world market (light metals, automotive parts, maritime equipment and services). While growth has primarily benefited the South, where most urban areas are located, demographic and economic patterns are more complex. Many rural areas all over the country experience population loss and offer limited job opportunities in spite of efforts to retain inhabitants. Few other countries feature the combination of very low population densities and difficult topography that hinders communication, in addition to a variety of contrasting climates. But the “Nordic welfare model” strives, with a good degree of success, to offer equal living conditions to all citizens by providing proper access to quality public services across the country. This comes, however, at great cost. Can such a model be sustainable in the long run, when population ageing and the reduction of petroleum reserves will reduce the leeway that the rapidly growing economy offers? Can competitiveness and innovation be further developed, given the high share of resource-based and traditional activities? Can urban policy be well integrated into regional policy so as to better harness the energy of regional growth engines in different areas of the country, including the northernmost parts? Lastly, can impending regional reform facilitate the necessary adaptations by transferring more power to regional councils?

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