The Economic Council

Aningaasaqarnermut Siunnersuisoqatigiit

The Economy of Greenland 2013

Economic Outlook

Public Finances

Migration
The Economic Council was set up by Naalakkersuisut (the Government of Greenland) in 2009; this is the Council’s fourth report.

The Economic Council is headed by a chairmanship of six people. This Chairmanship is composed of a Chairman, a Vice Chairman and four Council members, all of whom are appointed by Naalakkersuisut. Since publication of the last report, one of the posts has been replaced. Tønnes Berthelsen has joined as a Council member to replace Palle Høy.

In addition to the Chairmanship, the Economic Council comprises members from interest organisations, the Naalakkersuisut administration, and research institutions. Members representing organisations and research institutions are appointed by the organisations concerned. The other members are appointed by Naalakkersuisut.

The members of the Council can submit comments on the content of this report, but the Chairmanship has sole responsibility for the final content.

The secretariat function for the Council is carried out jointly by the Ministry of Finance and Danmarks Nationalbank. The task of the Economic Council is to carry out regular assessments of economic trends and of the sustainability of Greenland’s economic policy.

The Chairmanship comprises:
Chairman: Torben M. Andersen
Professor in economics at Aarhus University and former chairman of the Taxes and Welfare Commission. From 2001 to 2003 he was Chairman of the Danish Economic Council, and he is still active in the Council as a specialist expert.

Vice Chairman: Ulla Lynge
Ulla Lynge has an MSc in Public Administration from the University of Greenland and she is a director on the Sermersooq Business Council. Ms Lynge has extensive knowledge about Greenlandic society and she has previously worked for the Greenland Home Rule and for the Municipality of Nuuk.

Other members of the Chairmanship:
Anders Møller Christensen is a consultant at Danmarks Nationalbank and has an MSc in economics. He was a member of the Consultative Committee for Greenland's Economy from 1988 to 2009.
Anders Blaabjerg is Head of Statistics at Statistics Greenland and has an MSc in economics. He has previously been employed at the Ministry of Economic Affairs.
Søren Bjerregaard is Head of Division at the Ministry of Economic Affairs and the Interior and has an MSc in economics. He has previously been a member of the consultative committee for Greenland's economy.
Tønnes Berthelsen is a consultant at KNAPK and has an MSc EBA in economics from Copenhagen Business School and an MBA Int. Business (IB) from Leeds University. He sat on the Knutzon Committee, he has been an executive director at Arctic Green Food and he was Chairman of the Board of Directors at KNI.

Members of the Economic Council:
Brian Buus Pedersen, Director at the Confederation of Greenland (Grønlands Arbejdsgiverforening).
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Jess G. Berthelsen, Chairman of SILK.
Sivso Dorph, Chairman of IMAK and appointed by IMAK, AK and PIP.
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Summary

The 2013 report by the Economic Council contains the following themes:

- Economic outlook
- Public finances and the sustainability of economic policy
- Settlement and migration

The analyses in the report are described in more detail in a number of technical background memos available in Danish at http://naalakkersuisut.gl/da/Naalakkersuisut/Departementer/Finanser-og-Indenrigsanliggender/Oekonomisk-raad.

Economic outlook

A slight drop in overall economic activity is expected for 2013. There will be a further fall in exploration activity and fisheries are also expected to decrease slightly. Declines in shrimp catches are to a certain degree expected to be compensated for by high catches of other species, including experimental fishing for herring and mackerel. In recent years the fishing industry has been favoured by increasing prices for most species. Export prices are generally around 30% higher than in 2010. However, there is some uncertainty regarding future price developments.

For the economy as a whole, the Chairmanship of the Economic Council estimates that prospects for 2014 are zero growth; an improvement on 2013. The assumptions behind this estimate include a small growth in mineral exploration and a lower drop in building and construction investment than in 2013.

At all events, growth possibilities for fisheries are likely to be modest and there is even a risk that the industry will fall back. Fish and shellfish processing can only be recommended if it is on a commercial basis and without public subsidies. Developments in the fishing industry emphasise the importance of developing other private industry, with minerals extraction as the most realistic.

The increase in exploration licences in 2012 indicates that there may be more exploration activity in the years to come. However, interest will also depend on political clarification of the final design of the planned taxation through royalties in the extraction phase, and whether changes in the conditions for large-scale projects will make these more costly. Furthermore there is now the prospect of more applications for exploitation licences, with consequential hopes for greater activity in the mining sector after 2014.
Public finances and the sustainability of economic policy

The over-arching economic-political challenge is to create a foundation for business development to enhance growth and welfare. This is vital to secure society for the future and to create the foundation for greater economic self-sustainability. In this context public finances have a pivotal role. The current organisation of the welfare society and its financing base will give rise to systematic deficits and this is clearly unsustainable. This emphasises the need for comprehensive reforms to secure more self-sustainable and robust economic development.

The demographic composition of the population will change markedly in the future. The size of the workforce will stagnate and there will be more elderly citizens. This will lead to higher expenditure on health services, elderly care, and not least pensions.

In the Finance Bill for 2014, Naalakkersuisut stresses the need for reforms to underpin business development, ensure sustainable public finances, and thereby secure a self-sustainable economy. The great ambitions for reform have yet to be specified in detail, but it is positive that Naalakkersuisut is committing to initiating reform work now. It is important to implement well-thought-out reforms, both to support business development and to secure an economic foundation for the welfare society. Postponing reforms will only exacerbate problems and make them harder to solve.

It is vital to avoid a zigzag course in economic policy. Therefore it does not seem appropriate to reintroduce full tax deductions for interest expenses, as overall housing policy has yet to be clarified. The initiative augments an already high level of indirect subsidies for the housing sector. There is an urgent need for reform of the area and this should be seen in the context of plans for a capital gains tax.

Current economic developments could justify some easing of economic policy as proposed by Naalakkersuisut in, among other things, increased capital investment within education, which will also support the education strategy in the longer term. The Finance Bill for 2014 entails a deficit for 2014 and 2015 and it is expected to finance this in 2016-2017 with a series of initiatives which will result in equilibrium for the period 2014-2017. This strategy has a built-in risk because expenditure is realised before financing is in place. The Bill also assumes that sales of housing at Qinngorput will provide net proceeds of DKK 90 mill. The Chairmanship deems that in the current economic climate it will be difficult to sell a significant number of owner-occupied flats, and therefore Naalakkersuisut should plan alternative financing possibilities, if the proceeds of DKK 90 mill prove to be hard to achieve.
Considerable budget improvements are planned in the years covered by the Bill as a result of expected reform initiatives. The Chairmanship welcomes the plan to implement reforms to enhance the revenue base and to curb increases in public expenditure. Implementation of extensive reforms places significant demands on both administrative capacity and on the political willingness to implement such reforms, irrespective of whether they may meet resistance from parts of the public.

The Gælds- og Investeringsstrategien (debt and investment strategy) sets clear and appropriate standards for drawing up a decision basis for public investments. That Naalakkersuisut is now proposing 10-year sector plans for individual sectors strengthens this strategy. It also bolsters planning and improves opportunities to set priorities with a longer time horizon.

**Settlement and migration**

The possible social benefits of exploiting natural resources, including large-scale projects, depend on whether this leads to business development and thereby higher incomes and better employment prospects for the population. Realising a large-scale project using primarily local labour, and establishing derived businesses, will decisively improve the social perspectives and benefits. However, this places demands on the qualifications of the workforce. There must also be clear financial incentives to be in employment and to move to another job.

The Chairmanship of the Economic Council has analysed population movements more closely within Greenland, with regard to immigration and emigration, as well as for return migration, with special emphasis on the significance of migrants for business development.

The study shows that there is a concentration of people with educational qualifications in the large towns. This is reinforced by the fact that the level of education is generally higher for people who leave settlements and smaller towns than for those who stay. Finally immigrants, of whom the majority have educational qualifications, move almost exclusively to the large towns.

The distribution of incomes follows the level of education. People living in one of the larger towns have on average higher incomes than people living in smaller towns and settlements. People who have left the settlements and now live in the larger towns have on average higher incomes than people of the same age who remain in the settlements.

There is a high level of migration within Greenland and this entails a population migration away from settlements and to larger towns. A general trend in all countries is that, in line with economic development and changes in production, the population begins to concentrate around larger urban
areas. Migration of labour from rural to urban areas has been a contributory factor to economic development by releasing labour from primary sectors.

The study also shows that the vast majority of people born in Greenland and living in Denmark have the same attachment to the labour market at Danes in general. People who have emigrated to Denmark generally have a higher level of education than those who remain in Greenland.

The large net emigration from Greenland and the low level of return migration raises two important questions. Firstly whether there is a "brain drain", as the better educated young people emigrate. Secondly whether it is possible to reverse this trend by creating good business development and job opportunities through exploitation of natural resources.

Migration patterns in and out of Greenland are complex. There are many highly educated people with good qualifications who do well on the Danish labour market. These represent the "brain drain". At the same time, through immigration there is a considerable influx of well educated labour, of whom many find employment in the public sector. Overall there has been a net import of qualified labour.

Business development and a more self-sustainable economy could move migration in the opposite direction. This effect could arise through less emigration, and/or through return migration on completion of education. Business development based on exploitation of natural resources will lead to increasing demand for labour throughout the entire qualification spectrum and therefore an increased net immigration is expected of both highly educated labour and less highly educated labour.

Migration depends on business development and employment prospects, but regional and cultural aspects also play a role. An important barrier to mobility is availability of housing. Another barrier can be to obtain the qualifications required to get a good job. Possible realisation of a large-scale project will require increased mobility if the project is to comprise a high proportion of local employment. Therefore, there is also a need to modernise the mobility benefit so that it more actively supports mobility to areas with job opportunities.

A vital element in a self-sustainable economy is a high-quality education system at international level. The basis for this must be established through primary and lower secondary school, upper secondary education and vocational training. Many will have to take their education abroad. The high level of net emigration should be regarded as a symptom of a non-self-sustainable economy and not a cause of it. In the long term, reforms and initiatives to establish a self-sustainable economy are also likely to change migration patterns.
1 Economic climate

The economy shrank in 2012, and this situation will probably repeat itself in 2013. This is after some years with much stronger growth than most European countries.

In 2012, the drop was particularly due to a drop in exploration activity, while fisheries did somewhat better than was otherwise feared. Because of the flexible quota system, shrimp catches fell by much less than the quotas. At the same time, fish and shellfish prices rose further. Despite the drop in activity, there has only been a limited increase in unemployment. This seems to be because in 2012 there was a large net emigration from Greenland. See Figure in chapter 3.

In 2013 there is a prospect of a further drop in exploration activity, but this will be much less significant than in 2012. Fisheries are also expected to fall back slightly. Declines in shrimp catches are to a certain degree expected to be compensated for by high catches for other species, including experimental fishing for herring and mackerel.

Prospects for 2014 are zero growth; an improvement on 2013. The assumptions behind this estimate include a small growth in mineral exploration and a lower drop in building and construction investment than was seen in 2013.

The estimates are summarised in Table 1.1.

Table 1.1 Supply balance 2008-2014, annual real growth in percent

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Private consumption</td>
<td>47.6</td>
<td>-0.9</td>
<td>0.9</td>
<td>1.8</td>
<td>-0.7</td>
<td>-0.5</td>
<td>0.2</td>
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<td>Public consumption</td>
<td>52.6</td>
<td>2.2</td>
<td>-1.3</td>
<td>-0.3</td>
<td>0.3</td>
<td>0.8</td>
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<td>Total gross investment</td>
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<td>46.0</td>
<td>-28.2</td>
<td>85.2</td>
<td>27.0</td>
<td>-45.6</td>
<td>-14.6</td>
<td>5.6</td>
</tr>
<tr>
<td>excl. exploration investments</td>
<td>24.2</td>
<td>37.2</td>
<td>-27.5</td>
<td>17.3</td>
<td>-5.3</td>
<td>-3.8</td>
<td>-3.7</td>
<td>-2.3</td>
</tr>
<tr>
<td>Exports of goods and services</td>
<td>32.0</td>
<td>8.1</td>
<td>-8.8</td>
<td>2.1</td>
<td>11.4</td>
<td>-2.5</td>
<td>-2.6</td>
<td>-1.0</td>
</tr>
<tr>
<td>Total final use</td>
<td>200.5</td>
<td>10.1</td>
<td>-8.4</td>
<td>16.3</td>
<td>9.6</td>
<td>-15.8</td>
<td>-3.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Imports of goods and services</td>
<td>100.5</td>
<td>22.7</td>
<td>-15.6</td>
<td>33.4</td>
<td>17.2</td>
<td>-28.9</td>
<td>-6.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Gross domestic product</td>
<td>100.0</td>
<td>2.1</td>
<td>-2.7</td>
<td>4.9</td>
<td>3.2</td>
<td>-3.1</td>
<td>-1.4</td>
<td>0.0</td>
</tr>
</tbody>
</table>
1.1 Fisheries

In recent years the fishing industry has been favoured by increasing prices for most species. Export prices are generally around 30% higher than in 2010. In 2012, the export value of fish and shellfish was close to DKK 2,500 mill., but if prices had held at the same low level as in 2010, the 2012 export value, with unchanged quantities, would have been almost DKK 600 mill. lower. Therefore the significance of better prices cannot be overrated.

In Q1 2013 there was a slight drop in export prices, but this could be just a coincidence. The same thing happened in Q1 2012, and measured as an average over the past four quarters, prices have not been higher in the periods under consideration, see Figure 1.1. Moreover, exports are usually somewhat smaller in the first quarter of a year than in the other quarters.

Figure 1.1 Index for export prices of fish and shellfish Q1 2008- Q1 2013

Note: Weighting of index for the price per kilo of exports of shrimp, Greenland halibut, cod and redfish, with the export value in 2012 as the weight.
Source: Own calculations based on information from Statistics Greenland, Statistics Bank.

It has been estimated that in 2012, after eliminating price changes, total Greenland fisheries will be the same as in 2011. Catches in Greenlandic waters fell by 0.5%, but this was compensated for by higher catches in other waters, particularly the Barents Sea.
Shrimp quotas were reduced in both 2012 and 2013, but in 2012 catches did not drop by very much, see Figure 1.2. This is because of the flexible quota system, under which if a quota is not fully caught in one year it can be carried forward to the next. On the other hand, in 2013 shrimp catches are expected to fall by slightly more than in 2012.

In contrast Greenland halibut catches rose in 2012 and catches are also good in 2013. Biological consultancy for 2014 has been completed. The biologists are concerned about stocks in Disko Bay, but at the same time they have reported to Naalakkersuisut that there is room for larger open water quotas in Baffin Bay. Combined with increasing cod fishing, primarily coastal, and experimental fishing for mackerel and herring off East Greenland, overall prospects are for almost unchanged fisheries, with less shrimp and more of some other species. Quotas for 2014 will be set during the autumn. Therefore there is great uncertainty regarding the assessment for 2014.

At all events, growth opportunities in fisheries are deemed as limited in the years to come and there is a risk that the industry will decline. This emphasises the importance of developing other private industry, with minerals extraction as the most realistic. This topic was covered in detail in the Economic Council's 2012 report. A higher degree of fish and shellfish processing in Greenland could help employment in the fishing industry, but the relationship between the prices of raw materials and the more processed products, in some cases, make processing onshore unprofitable. Fish and shellfish processing can only be recommended if it is on a commercial basis and without public subsidies.
1.2 Resources exploration

Resources exploration has proved to affect significantly the economy in local areas, in particular the transport sector. In addition, there are tax revenues. However, the majority of exploration expenditure is on imported goods and services.

In 2010 and 2011, there was high activity in oil exploration off West Greenland. There has been no exploration drilling in either 2012 nor 2013, but much other activity continued, for example seismic studies. The sharp growth in oil and gas production in North America through fracking or exploitation of tar sands has reduced US dependence on hydrocarbons and thus also many oil companies’ interest in hydrocarbons from areas with high extraction costs.

With regard to mineral resources, the number of exploration licences increased from 75 to 97 in 2012, but expenditure on exploration fell considerably, see Figure 1.3. The outlook for 2013 is a further fall. In particular this reflects less field work than in previous years. A number of mineral resources have fallen in price on the global market, and interest in access to hydro-power has also dropped off as the...
price of CO₂ allowances has fallen drastically. The slow-down in growth in the Chinese economy is an important factor in this context.

**Figure 1.3 Exploration expenditure 2005-2012**

Expenditure on oil exploration has been converted from USD to DKK; 2012 has been estimated by the Economic Council. Source: Statistics Greenland, Statistics Bank. Danmarks Nationalbank for exchange rates.

The large increase in exploration licences in 2012 indicates, however, that there will be more exploration activity in the years to come. However, interest will also depend on the final design of the planned taxation in the extraction phase through royalties, and whether changes in the conditions for large-scale projects will make these more costly. Until the conditions are known and there is confidence that they will be lasting, not much is likely to happen.

### 1.3 Other investments

Capital investment by the Government of Greenland will drop in 2013 and in future years according to the 2013 Finance Act, the Finance Bill for 2014 and the budgets up to 2017. Among other things, this reflects completion of the hydro-power plant at Ilulissat in 2013. After deduction of loans to Nukissiorfiit, the Finance Bill includes an increase in capital investment in 2014.

Mortgage-credit lending continued to rise in Q1 2013, while borrowing from banks has been more or less stable in recent years, see Figure 1.4. This indicates receding private investment.
Freehold housing has become much more widespread in recent years. Among other things, this is apparent from the increasing mortgage-credit lending. Freehold housing also brings with it possible problems for economic stability. Freehold housing will often have a loan in it from the Greenland Government and the municipality. There is usually no interest and repayment on these loans for 20 years, after which they are subject to an interest rate at the Danmarks Nationalbank bank rate plus usually 3% and they are to be repaid over 15 years.

The significant subsidies in the long period without interest and repayment may result in prices being held artificially high. When, after 20 years, the loans are subject to interest and must be repaid, all else being equal, prices of properties with such loans are likely to drop, if the loan payments have not been taken into account in sales material. This could cause problems for economic stability, especially if prices fall in line with increasing unemployment or interest-rate rises on mortgage-credit loans. Therefore it is recommended to take initiatives to reduce this risk. For example, by introducing change-of-owner deductions on future loans or by gradually phasing out the scheme.

Note: Latest observation was Q1 2013.
Source: Danish FSA and Danmarks Nationalbank.
In 2012, according to statistics on Greenlandic foreign trade, almost no ships or aircraft were imported and imports of lorries and vans were modest. Investments in transport have therefore been very small. At the same time, purchases of ships by Royal Arctic Line have been delayed by the bankruptcy of a German shipbuilder, so this type of investment is also expected to be low for 2013.

1.4 Consumption
Private and public consumption is stable or slightly increasing. Public consumption is increasing weakly, while import taxes indicate that private consumption is more or less unchanged. Consumption of alcohol and tobacco continues to decline, while new construction means that building consumption is increasing. These trends are in line with developments in incomes according to regular statements of the tax base.

1.5 Labour market
The only source of data for ongoing assessment of the labour market is the number of registered job seekers. The statistic shows the number of people who during a single month have registered at unemployment offices as job seeking. This administrative practice of registration can, however, have varied from year to year and from municipality to municipality, not least before 2012, when guidelines were issued about the criteria case officers have to apply for registration.

Therefore it is not possible to assess developments in the number of job seekers over a longer period. In the first six months of 2013 the number of registered job seekers in towns was at the same level of 3,200 on average as in the first six months of 2012. Some of these 3,200 people may well have had paid employment for some of the month, but they have also registered as job seeking at some time during the month.

However, it is surprising that there has not been an increase, given that economic activity has fallen. One explanation may be that net emigration from Greenland increased from 160 people in 2011 to more than 700 in 2012. Statistics Greenland has started publishing annual unemployment statistics. These statistics do not include people among the unemployed who have registered as job seekers and have had paid employment in the same month. For 2011, the number of unemployed amounted to 2,518, while the number of registered job seekers on average over the year was 3,510. Both these figures include the settlements.

In 2011, the 2,518 unemployed corresponded to 9.4% of the workforce, and there are fears that the figures for 2012 will show an even higher unemployment rate. Figures for employment and unemployment for 2012 are planned for publication in December 2013.
On the basis of the statistical base available, there is some uncertainty in the assessment of the labour-market situation. There are indications that unemployment has been increasing in recent years, but the current statistics do not indicate any rise from the first six months of 2012 to the first six months of 2013. With the reservation that data for 2012 is not yet available, one of many signs of structural problems on the Greenlandic labour market is that in 2011 there was immigration of unskilled labour, even though there was also high unemployment. This suggests that the unemployed do not have the qualifications required, or they do not seek the jobs available for geographic or professional reasons, or there is not sufficient financial incentive to be in work. Therefore, the level of education must be raised, professional and geographic mobility must be enhanced, and the benefits of being in employment must be improved.
2 Public finances and the sustainability of economic policy

The over-arching economic-political challenge is to create a foundation for business development to enhance growth and welfare. This is vital to secure society for the future and to create the foundation for greater economic self-sustainability. In this context public finances have a pivotal role. The current organisation of the welfare society and its financing base will give rise to systematic deficits, and this is clearly unsustainable. This emphasises the need for comprehensive reforms to secure more self-sustainable and robust economic development.

2.1 The sustainability of economic policy

As a basis for assessing the current position of the welfare society, it is useful to assess development trends in public expenditure and revenues. This is through analysing the sustainability of economic policy. A sustainable economic policy is synonymous with balanced public revenues and expenditure in the long term. This implies that there are no escalating public-budget deficits which require sudden shifts in economic policy, either as tax increases or cuts in welfare services. Sustainable economic policy is therefore an important indicator in economic planning and it is pivotal for socio-economic development.

The assessment of the sustainability of economic policy is based on the existing economic framework, including the current business structure, tax system, welfare schemes etc. This is combined with the assumption of demographic developments and thus changes in the workforce, productivity growth etc. The purpose of the analysis is therefore to assess whether the current economic policy is sustainable and whether there will be a need to change economic course in the future. An analysis of the sustainability of economic policy is not a forecast of future developments, but it is a decision-making tool to assess the need for economic reforms. Similarly, the sustainability analysis can be used to analyse the effects of proposed or planned economic reforms on public finances or the effects of changes in the economic situation (e.g. commencement of a large-scale project).

An analysis of the sustainability of economic policy places great demands on access to data and modelling tools, and it generally entails great uncertainty. The Economic Council has assessed the issue of the sustainability of economic policy in previous reports, and the following is a presentation of an updated analysis which includes the most up-to-date data as well as certain improvements and updates of the analysis base. For more detailed documentation, see the technical background memo on the sustainability of economic policy.
2.2 Demographic developments

Demographic developments are an important factor in the sustainability analysis. In future the age composition of the population will change drastically. This is clear from the dependency ratio, which is the number of dependents (children, elderly, etc.) relative to the total number of providers (people at work etc.) in the population, see figure 2.1. An increase in the dependency ratio indicates that more people need providing for and that there are fewer people of working age to provide for them. The increasing costs should also be compared with the changed profile of non-working people, who are primarily older rather than younger. A growing older population gives rise to increasing public expenditure and transfers, especially through health benefits and pensions.

Figure 2.1: Dependency ratio 2006-2040


The level of health benefits is still lower than in many other countries, see (Deloitte, 2010). In the future this is expected to cause pressure for improvements in the health area and consequential increases in expenditure which exceed the assumptions in the sustainability analysis. On the other hand, it is also expected that the population will be more health conscious and that they will be influenced by preventive initiatives, which will move in the direction of a more healthy lifestyle and population. Generally, improved health in the population, ("healthy ageing") has dampened the pressure on expenditure in the health sector.
2.3 The profile of public finances

Figure 2.2 shows the profile of the developments in overall public expenditure and revenues as a percentage of gross domestic product (GDP) up to 2040. Expenditure will rise systematically, while revenues will remain more or less unchanged measured as a percentage of GDP. The current organisation of the welfare and tax system in relation to the demographic trends results in a systematic budget deficit. The situation is untenable and demands far-reaching reforms to secure the welfare society for the future. If a balanced budget is to be achieved towards 2040, permanent and persistent budget improvements are needed of up to DKK 1 bn. The long-term economic policy challenge is therefore deemed to be unchanged compared with previous analyses, and this reflects that no reforms have been decided which will significantly help solve the sustainability problem.

Figure 2.2: Public revenues and expenditure as a percentage of GDP, 1994-2040

The increasing pressure on expenditure primarily arises from demographic trends, i.e. an increasing number of older people. Changes in expenditure are shown in figure 2.3. There will be especially high increases in expenditure on pensioners and facilities for the elderly (nursing homes, home help), but as mentioned above, further pressure on the health services from other factors cannot be ruled out. Increases in expenditure also reflect that there will be an increasing need for staff in the elderly area if the current standard and level of service is to continue. Therefore the development covers both a
financing need and a staffing need within central welfare areas. As developments in the population are not uniform throughout Greenland, especially between towns and settlements, see chapter 3, further pressure may arise with regard to maintaining current standards in all of Greenland.

**Figure 2.3 Break-down of expenditure development from 2011 to 2040, 2011 prices/salaries**

![Expenditure Breakdown Chart](source)

Source: The sustainability model, own calculations.

### 2.4 Public finances, business development and employment

The current organisation of the welfare and tax system is untenable as it is leading to systematic budget deficits. Therefore there is a need for far-reaching reforms. In principle, the financing problem could be solved in three ways. This may be through savings and adjustments on the expenditure side and therefore a lower level of welfare services. It can be through tax increases to raise the financing base. Finally, it could be by increasing the percentage of the population in employment. The first solution will mean considerable changes to the welfare society and this does not match the ambitions with broad political support. The second solution will have considerable consequences in a very open economy in which there is a need to support business development and in which there is a systematic trend towards net emigration (see chapter 3). The third solution, involving reforms, therefore seems
more attractive and at the same time it is linked to the overall goal to strengthen business development and secure a self-sustainable economy through exploitation of natural resources. However, it should be emphasised that this reform strategy imposes strong demands for radical reforms to support business development and an increase in employment in jobs with reasonable pay levels. As a point of departure, this in turn imposes qualitative and quantitative demands on the workforce, see chapters 1 and 3.

An active strategy, linked to business development and increased employment, will also help create growth and increased welfare as well as improved public finances. The table below is a summary assessment of the effects on public finances of an individual transition from receiving public support and into a job. It is clear that there is a somewhat significant effect on public finances, and this emphasises why reforms aimed at increasing employment will also contribute considerably to improving public finances and thus solving the sustainability problem. This also illustrates the social benefits of business development linked to exploitation of natural resources whereby, through reforms, the foundation will be established for the greatest possible use of local labour. The effect on public finances of local employment is therefore larger than that of imported labour. Foreign labour paid at the minimum wage approved by the Greenlandic trade unions (Sulinermik Inuussutissarsiuteqartut Kattuffiat - SIK) will benefit public finances by around DKK 43,000 for a single person paying gross taxes. Finally it should be emphasised that the transition to employment has such a large impact on public finances because of the combination of saved expenses and increased tax revenues. The counterpart to this is limited economic benefits for the individual from entering a job, see Technical Background Memo 2013-3:”Effekter på de offentlige finanser af øget beskæftigelse” (effects of increased employment on public finances).

<table>
<thead>
<tr>
<th>DKK</th>
<th>Change in public finances</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Revenues</td>
<td>Expenditure</td>
</tr>
<tr>
<td>Public assistance recipients finding a job Employees on SIK minimum wage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>50,364</td>
<td>-60,960</td>
</tr>
<tr>
<td>Single with 1 child</td>
<td>50,364</td>
<td>-88,976</td>
</tr>
<tr>
<td>Couples with 1 child</td>
<td>50,364</td>
<td>-57,858</td>
</tr>
<tr>
<td>Couples with 2 children</td>
<td>50,364</td>
<td>-67,580</td>
</tr>
</tbody>
</table>

Note: for a more detailed account of the calculation assumptions etc., see memo on effects of increased employment on public finances.
Reforms which increase the supply of labour and bring the marginal group into employment will therefore contribute to improving public finances, ensuring better welfare and securing more equal distribution of income. The need for reform is linked to both the quantitative and qualitative side of the supply of labour, i.e. to ensure that as many as possible are in the workforce and to increase the qualifications of the workforce. These needs for reform have previously been described by the Taxes and Welfare Commission (2011) and the Economic Council (2011, 2012).

2.5 Current economic policy

In the Finance Bill for 2014, Naalakkersuisut stresses the need for reforms to underpin business development, ensure sustainable public finances, and thereby secure a self-sustainable economy. Reforms are announced for a number of areas (pensions, social benefits, tax, housing as well as modernising/streamlining the public sector) and there are a number of principles for managing economic policy in general as well as more specifically public expenditure, including in particular capital investment.

The great ambitions for reform have yet to be specified in detail, but it is positive that Naalakkersuisut has now announced commitment to initiating reform work. It is important to implement well-thought-out reforms, both to support business development and to secure an economic foundation for the welfare society. Postponing reforms will only exacerbate problems and make them harder to solve. In specific areas there may be a conflict between short-term reductions in unemployment and long-term considerations. However, the underlying problems have such gravity that primary focus should be on getting far-reaching reforms implemented. There is no such conflict in the most important areas. Thus, increased capital investment within the education area benefits activity in the short term and it underpins the training and education strategy in the longer term. Any further initiatives in relation to activity should follow this principle.

It is vital to avoid a zigzag course in economic policy. Therefore it seems less appropriate to reintroduce full tax deductions for interest expenses, as overall housing policy has yet to be clarified. The initiative augments an already high level of indirect subsidies for the housing sector. There is an urgent need for reform of the area and this should be seen in context. At the same time, tax deductions for interest expenses should be considered in the context of other capital gains taxes, where tax incentives for individuals to take on debt should generally be avoided.

In the 2014 Finance Bill, the new Naalakkersuisut has decided to prioritise education, the family area and employment efforts. Large capital investments in education and colleges as well as pre-schools are
proposed. Proposals entail in particular higher priority on pre-schools and child well-being as well as educational advice and psychological support for young people in or outside an educational programme. These initiatives are important, but their effect will not be apparent for a number of years.

The current assessment of the economic situation (see chapter 1) may justify some relaxation in economic policy, as proposed by Naalakkersuisut, for the next two years. The outlook is for zero growth for the next year, following some years in which GDP first rose markedly in 2011 then and fell back to a more normal level in 2012 and 2013. However, there is some uncertainty in assessments of the labour-market situation and the statistical base is being improved. There are indications that unemployment has been increasing over recent years, but the current statistics do not indicate any rise from the first six months of 2012 to the first six months of 2013. At the same time there are indications that a large part of unemployment is linked to structural problems (qualifications, geography and active job-seeking). This points to unemployment being a structural problem rather than a problem arising from the economic situation. A significant reduction in unemployment requires reforms with structural improvements. If there is a need for relaxations in economic policy, in the long term these should also improve structural aspects, e.g. the current education and training strategy through construction of colleges and schools as well as the national sector plan.

The Finance Bill has a deficit in 2014. In recent years economic policy has followed an objective to balance the current and investment account (CI) in each budget year. The sitting Naalakkersuisut is aiming at a surplus on the CI over a four-year period. The Finance Bill for 2014 entails a deficit for 2014 and it is expected to finance this in 2015-2017 with a series of initiatives which will result in equilibrium for the period 2014-2017. This strategy has a built-in risk due to the fact that expenditure is realised before financing is in place. Among other things there is a crucial assumption in the proposal that sales of housing in Qinnorput will yield DKK 90 mill. The Chairmanship deems that in the current economic climate it may be difficult to sell a significant number of owner-occupied flats. Therefore alternative revenue-generating options or savings should be planned, if it turns out that the DKK 90 mill is hard to achieve.

The surplus target assumes considerable budget improvements in the years covered by the Bill, as a result of expected reform initiatives. The Chairmanship welcomes the plan to implement reforms that can enhance the revenue base and curb increases in public expenditure. Implementation of extensive reforms as outlined places significant demands on both administrative capacity and on the political willingness to implement such reforms, irrespective of whether they may meet resistance from parts of the public.
2.5.1 Management instruments for economic policy

The Finance Bill also underlines some important aspects with regard to managing economic policy.

Public finances are primarily managed on the basis of liquidity considerations via the current and investment account (CI account). The Economic Council has previously pointed to the problems entailed in this practice. The CI account is a rigid economic-policy indicator which cannot stand alone. Different types of costs are included, including one-off revenues and capital investments, and the account is also impacted by staggered payments. For example, the Finance Bill includes a financing element from the sale of housing, see above, which is actually realisation of resources (an asset) in housing and therefore not actual income but in fact just a reallocation of assets. Internationally the CI account is not applied as a management instrument for economic policy, but in contrast it is used as the public account, as calculated according to national accounting policies, see Technical Background Memo 2013-4: "Finanspolitisk Holdbarhed" (sustainability of economic policy). Under these policies revenues and expenditure are accrued according to the date of the economic activity. This is the basis for the sustainability calculations. It is recommended that this method of calculation be applied in connection with setting economic-policy plans. This will also make the relationship with sustainability assessments simpler and clearer.

The Chairmanship has previously recommended using expenditure caps as a management instrument. This suggestion has been realised in the Finance Bill for 2014. The Bill builds on the premise that during the period 2014-2017 rationalisation of operation of the public sector will be implemented. This is an important political priority and therefore it is important to ensure that this development is realised. Clearly formulated caps on expenditure can be appropriate in this context (see Economic Council (2012)).

With regard to investment, the 2012 Gælds- og Investeringsstrategien (debt and investment strategy) stipulates some fundamental principles:

- In a normal year there must be a surplus on the current and investment account for the year, and interest and repayments must not limit possibilities to deliver public services during economic downturn.
- The public sector should only take on lending which contributes to improving the sustainability of economic policy.
• The public sector should only take on lending for housing, and commercial and infrastructure projects provided the increased user payment can at least finance interest and repayment of the debt.

• Total public debt should be calculated ongoing and in context so that it is simple to see the size of the public debt at any given time.

This means that ongoing capital investments as well as extraordinary revenues should primarily be applied in constructing the schools and colleges necessary to underpin the education and training strategy. It also means that more infrastructure projects are likely to be initiated. The principles in the Debt and Investment Strategy (Gælds- og Investeringsstrategien) set clear and appropriate standards for drawing up a decision basis for public investments. The principles and criteria in the strategy form the basis for the socio-economic impact assessment planned by Naalakkersuisut to be used as an important basis for decisions on larger investments. This will contribute to moving the public economy in a more sustainable direction and this is vital in order to maintain credibility with lenders.

That Naalakkersuisut is now proposing 10-year sector plans for individual sectors strengthens this strategy. In a number of areas there is a considerable maintenance backlog because of inadequate monitoring of investments. This is now being addressed in that, for all larger public investments, a business model is to be established for each project which meets the requirements in the Debt and Investment Strategy (Gælds- og Investeringsstrategien) in order to ensure that total public debt does not rise to a risky level.

It is vital that there is political support to maintain the guidelines in the Debt and Investment Strategy (Gælds- og Investeringsstrategien) in order to ensure that public investment contributes to sound socio-economic development.
3 Settlement and migration

3.1 Introduction

Possibilities to establish a self-sustainable economy are linked to exploitation of natural resources and at the moment options for new activities are greatest for mineral resources. This will have particularly large perspectives if a large-scale project is initiated. These projects have a certain requirement for labour. There are also derived effects, some directly linked to projects in infrastructure, housing, supply activities, etc. and some more general, derived activities. Most of the employability potential will be geographically localised, directly near the production activity, but there will also be derived effects in other areas (utilities, transport etc.)

If the labour need cannot be met from the local labour force, it will be covered by importing external labour. During the construction phase, the labour need will be particularly high, and therefore large-scale projects will require labour imports. During the operating phase, there are other perspectives and therefore the following focuses on the operating phase.

The possible social benefits of exploiting natural resources, including large-scale projects, depend critically on whether this leads to business development and thereby higher incomes and better employment prospects for the population, Economic Council (2012). This applies to both the direct and the derived effects. Realising one or several of these projects using primarily imported labour, and without exploiting the possibilities to establish derived businesses etc., will decisively reduce the social perspectives and benefits from these projects. Securing the desired development places a number of quantitative and qualitative requirements on the workforce, i.e. a large workforce with the necessary qualifications and which is mobile with regard to the business opportunities. In order to realise this, there are three pivotal requirements.

- **Qualifications:** Most of the job opportunities are linked to exploiting natural resources, and derived activities, and these entail qualification requirements. In particular there will be good potentials for people with relevant occupational education and training.

- **Incentives:** There must be clear financial incentives to be in employment, i.e. there must be a financial benefit from (moving to) work. The financial incentives should be considered in the context of the opportunities linked to access to housing, childcare etc. Standards and attitudes should also support the importance of education and of being self-sufficient.
• **Demographics and migration:** Population growth has stagnated because of net emigration, and the size of the workforce is falling. At the same time there is a demographic challenge in that the location of the possible projects does not match the geographic location of the population.

The issues and challenges linked to education and incentives have been analysed previously (see Economic Council (2011, 2012), Taxes and Welfare Commission (2011)), and therefore the section below examines in more detail the challenges created by demography, settlement patterns and migration. These are conditions which can impact the quantitative and qualitative aspects of the supply of labour and employment.

There are three crucial demographic trends:

- Falling numbers of people of working age.
- Stagnating population growth and high net emigration.
- Concentration of population around major towns.

It is well known that demographics are changing and there will be more elderly people, and that this in itself will cause economic challenges, see the discussion in chapter 2. A reflection of this development is a falling number of people of normal working age, both in absolute terms and in relation to the size of the population, see Figure 3.1. In brief, the workforce will shrink, both absolutely and relatively, if the current development continues. This development can be counteracted by increasing the number of people of working age who are active in the labour market, and through focus on early entrance (early commencement of education, lower drop-out rates etc.) and later exit (raising the retirement age) from the labour market.
The size of the population has been more or less constant for many years, despite a higher birth rate than death rate. There is a high level of both immigration and emigration, but a systematic trend towards net emigration, see Figure 3.2. The vast majority of emigrants do not return, and in a number of areas there is a great need to attract qualified labour, see below.

Figure 3.2 Population trends, 1987-2012

Note: The birth surplus is equal to the number of births less the number of deaths. Net immigration is the difference between immigration and emigration.
A general trend observed in all countries is that, in line with economic development and changes in production, the population begins to concentrate around larger urban areas. Migration of labour from rural to urban areas has been a contributory factor to economic development by releasing labour from primary sectors. Increased division of labour and productivity are important drivers in this development. Larger towns create larger markets and facilitate economies of scale, not only for production, but also for education, welfare and living conditions (culture). The concentration of the population is therefore closely linked to changes in social structures, business structures, educational opportunities, family patterns, etc. Figure 3.3 shows a marked drop in the percentage of the population living in settlements. This development is the same as in other countries and is likely to continue. However such a development also creates special challenges for small settlements, with a distorted population composition (high percentage of elderly and few of working age) in relation to securing equal living conditions.

**Figure 3.3 Percentage of population living in settlements, 1977-2025**

Population movements are explained further in the following sections. Section 3.2 considers population movements within Greenland, while section 3.3 analyses immigration and emigration. The issue of return migration is especially linked to a business development described in section 3.4. Section 3.5 concludes the chapter.

### 3.2 Population movements

#### 3.2.1 Population movements

The Greenlandic population is growing every year because there are more births than deaths, but at the same time the population is reduced because emigration exceeds immigration. The conflicting
effects of birth surplus and net emigration means that in the last 20 years the population of Greenland has remained stable at between 55,000 and 57,000 inhabitants, although the trend is slightly upwards.

Over the past 20 years the number of births has fallen from around 1,100 to about 800 a year. This is partly because of a drop in the number of women of child-bearing age and partly because Greenlandic women are having fewer children. The number of deaths over the same period has been stable at about 450 per year.

In the period 1993 to 2012, the number of emigrations every year exceeded the number of immigrations. On average, net emigration is around 400 people a year, although there are large fluctuations such that in 2012 net emigration was about 700 people compared with just 150 for the previous year.

**Figure 3.4 Birth surplus and net immigration for the period 1993-2012**

If the current trends continue, the population will fall over the coming 20-30 years. The number of births is expected to fall further, with the number of deaths increasing as more people become elderly. Statistics Greenland's projections predict a drop in the population of almost 2,500 inhabitants up to 2040.
Distribution of the population by location

In the period 1993-2013 towns absorbed both population growth and migration from the settlements. The population has not increased in all towns, growth is concentrated in the large towns Nuuk, Sisimiut, Ilulissat and Qaqortoq. Over the past 10 years the population has increased in Upernavik, Tasiilaq and Qaanaaq, which are population centres in districts with a lot of settlements. Population growth has been especially high in Nuuk, where the population has increased by almost 4,300 over the past 20 years.

The population of almost all settlements has fallen. The largest drop has been in South Greenland settlements, with the population falling to almost half. In North Greenland earnings potentials from Greenland halibut fishing in many locations have made it possible to limit the drop in population. The populations of the settlements in Upernavik have increased by 107 to 1,656 over the past 20 years.

Populations of the younger age groups in particular have fallen in the settlements. The number of inhabitants below 40 years-old in the settlements has fallen by 39% in the past 20 years, while the number over 40 has increased by 23% in the same period.
The drop in the number of younger residents in the settlements is not only based on the current migration. Previous migrations have contributed to there being fewer residents in the settlements in the age groups which have children. The situation that the population development is also a result of previous years’ migration patterns also means that the decline in the population of settlements, with a high proportion of elderly, will not be reversed by just stopping emigration. Stabilising the population of the settlements at the current level requires a net immigration of the younger age groups.

**Relocation and migration**

The numbers of people relocating and migrating every year are large in proportion with the size of the population. In 2012, 7,378 internal relocations within Greenland were registered, and there were 2,900 emigrations.
Residents in settlements move most frequently, and often to other settlements or towns in the region. People move to Nuuk and abroad from all locations in Greenland, while people who move from Nuuk primarily move to Denmark.

People aged between 16 and 30 move more frequently than other age groups, probably mostly because of their education. In this age group too there is significantly more relocation to and from settlements than towns.

If only people born in Greenland are considered, every year there is an over-weight of women who move away such that in the past 20 years women have made up 56% of net emigration; more than 7,200 people. The emigration of women born in Greenland, added to the fact that the majority of immigrants born outside Greenland are men, means that the proportion of women in the age group 18 to 64 now only amounts to 46%.

### 3.2.2 Generations 1978-80

In order to describe in more detail the migration patterns inside Greenland, a detailed analysis over the period 1994 to 2012 has been made of people born from 1978 to 1980. The demographic information about this population group has been compared with information about highest completed level of education in 2012. See Technical Background Memo 2013-1: Population movements within Greenland.
**Movements**

Of the 2,357 people from 1978-80 who lived in Greenland in 1994, 125 have subsequently died and 443 have emigrated. Remaining in Greenland are 1,789 people, supplemented by 410 who have immigrated to Greenland.

Many immigrants have only lived in Greenland for a short period. A total of 1,484 people who did not live in Greenland in 1994 have subsequently immigrated. Of these, 410 still lived in Greenland in 2012, and of these 58% move to Greenland within the three years prior to 2012.

Among those who lived in Greenland in 1994, but not in 2012, about one-half were either born outside Greenland themselves or had at least one parent who was born outside Greenland.

Nuuk has attracted a large proportion of those relocating, both from abroad and from other parts of Greenland. The only other locations which experienced net immigration of the generations from 1978 to 1980 in the period 1994 to 2012 are Ilulissat, airfield settlements and the stations as well as four smaller settlements in North Greenland.

**Figure 3.8 People born in 1978-80 divided by residence 1994-2012**

There is generally high mobility for those born from 1978 to 1980. In 2012, 39% had kept an address in the same location as in 1994, but the majority of these people had lived way from the location for a short or long period before returning. Almost one-half of those born in 1978 to 1980 have lived outside Greenland for a shorter or longer period.
Level of education
In 1994, people from generation 1978-80 were 13-15 years-old and were about to complete basic schooling. In 2012 they were in the 31-33 age group, and it is likely that the majority of those who were going to complete an education after primary and lower-secondary school would have done so by this time.

A total of 53% of the people resident in Greenland in 1994 had completed an education after lower-secondary school in 2012. The percentage of an age group who complete an education is least for people living in settlements at the time they leave lower secondary school. Only 34% of this group have subsequently completed further education.

The trend towards a concentration of people with an education is higher in towns, and this is reinforced by the fact that the level of education is generally higher for people who leave settlements and smaller towns than for those who stay. With regard to immigrants, the majority have an academic qualification and they almost exclusively move to the larger towns.

Figure 3.9 Level of education obtained up to 2012 by those born in 1978-80. Analyzed by place of residence when 13-15 years-old in 1994

Source: Own calculations
People who have emigrated to Denmark generally have a higher level of education than those who remain in Greenland. In 2012, 66% of those who since 1994 have left Greenland have an academic qualification in addition to primary and lower-secondary school. A large proportion of emigrants have a special link to the world outside Greenland; either because they themselves were born outside Greenland, or because at least one of their parents was born outside Greenland. In particular this group of emigrants have a high level of education, as 83% of the group have an academic qualification in addition to lower-secondary level.

The distribution of incomes seems to follow the level of education. People living in one of the larger towns in 2012 have on average higher incomes than people living in smaller towns and settlements. People who have left the settlements since 1994, and in 2012 live in the larger towns, have on average much higher incomes than people of the same age who remain in the settlements.

### 3.3 Immigration and emigration

Emigration from Greenland is primarily to Denmark, and people moving to Greenland primarily come from Denmark. In the period from 1993 to 2012, 91% of emigration was to Denmark and 89% of immigration was from Denmark. Even though people born in Greenland live in other countries as well, by far the majority of people born in Greenland either live in Greenland or in Denmark. In the past decade alone, the number of people born in Greenland but living in Denmark rose by 2,500, corresponding to an increase of almost 2% per year, see Table 3.1. In the same period, the number of people born in Greenland and resident in Greenland only grew by a little more than 500.
This development means that an ever smaller percentage of people born in Greenland actually live in Greenland. At the start of 2012, this percentage was 77.2%. Ten years ago the figure was 80.2%.

The falling percentage of people living in Greenland is particularly widespread for people in their 30s and older. In contrast, people in their 20s are increasingly resident in Greenland, and this may be because there are now more educational and training opportunities. It could also be connected with later completion of upper secondary education or fewer people looking for education or work in Denmark. Another factor is an increasing percentage of young people who emigrate from Greenland then return after a stay abroad, see below. No change seems to have taken place for children and young people younger than 20, where migration is especially determined by parents moving and short periods of schooling in Denmark, see Table 3.2.

### Table 3.2 People born and resident in Greenland as a percentage of people born in Greenland and resident either in Greenland or in Denmark, percentage of year group as at 1 January 2002-2012

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Up to 16 years</td>
<td>89.9</td>
<td>89.8</td>
<td>90.1</td>
<td>89.5</td>
<td>88.9</td>
<td>89.3</td>
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<tr>
<td>16 - 20 years</td>
<td>78.4</td>
<td>78.3</td>
<td>79.6</td>
<td>79.7</td>
<td>79.3</td>
<td>78.9</td>
</tr>
<tr>
<td>21 - 30 years</td>
<td>72.5</td>
<td>74</td>
<td>75.9</td>
<td>75.7</td>
<td>76.6</td>
<td>77.2</td>
</tr>
<tr>
<td>31 - 40 years</td>
<td>74.6</td>
<td>73.1</td>
<td>71.2</td>
<td>69.1</td>
<td>67.4</td>
<td>68.6</td>
</tr>
<tr>
<td>41 - 50 years</td>
<td>75.2</td>
<td>74.5</td>
<td>74</td>
<td>73.1</td>
<td>72</td>
<td>70.5</td>
</tr>
<tr>
<td>More than 50 years</td>
<td>82.9</td>
<td>81.6</td>
<td>79.9</td>
<td>78.3</td>
<td>76.7</td>
<td>75.1</td>
</tr>
<tr>
<td>Total</td>
<td>80.2</td>
<td>79.7</td>
<td>79.3</td>
<td>78.4</td>
<td>77.6</td>
<td>77.2</td>
</tr>
</tbody>
</table>

Note: The table does not include people born in Greenland and resident outside Greenland and Denmark. Source: Statistics Greenland and Statistics Denmark

As in other societies, emigration is most frequently among the young. This is clear from Table 3.3, which shows the frequency of emigration (the number of emigrants as a proportion of the population) for selected age groups. Education and job opportunities abroad (especially in Denmark) are a strong magnet, and the young have often not yet established a family and are therefore also more mobile. In
the period for which statistics exist for immigration and emigration, people younger than 30 account for 72% of the net migration, and people younger than 40 account for as much as 80% of net migration.

The trend towards increasing emigration applies across age groups. The largest change in migration patterns seems to have been in immigration patterns, where in particular those born in Greenland, and who are resident in Denmark in their 20s, are increasingly returning to Greenland. This is apparent from immigration frequency in Table 3.3, which is the number of immigrants born in Greenland compared with the number of people born in Greenland and resident in Denmark. The same trend cannot be seen for people in their 30s or 40s; rather the contrary. This pattern helps explain the increasing percentage of people born in Greenland in their 20s who live in Greenland, with a falling percentage of older people born in Greenland and who still live in Greenland. It is too early to conclude whether this is due to special conditions, or whether it is an actual trend.

Table 3.3 Emigration and immigration frequency 2001-2011

<table>
<thead>
<tr>
<th>Age intervals</th>
<th>2001</th>
<th>2003</th>
<th>2005</th>
<th>2007</th>
<th>2009</th>
<th>2011</th>
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<tr>
<td>Emigration rate in per cent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 - 30 years</td>
<td>2.9</td>
<td>3.4</td>
<td>3.8</td>
<td>4.5</td>
<td>4.5</td>
<td>3.9</td>
</tr>
<tr>
<td>31 - 40 years</td>
<td>1.7</td>
<td>1.6</td>
<td>1.7</td>
<td>2.1</td>
<td>2.1</td>
<td>2</td>
</tr>
<tr>
<td>41 - 50 years</td>
<td>1.1</td>
<td>1.3</td>
<td>1.5</td>
<td>1.7</td>
<td>1.6</td>
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<td>Immigration rate in per cent</td>
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<tr>
<td>21 - 30 years</td>
<td>7.4</td>
<td>7.1</td>
<td>10.5</td>
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<td>11.5</td>
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<td>31 - 40 years</td>
<td>4</td>
<td>3.3</td>
<td>3.7</td>
<td>3.1</td>
<td>3</td>
<td>3.7</td>
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<tr>
<td>41 - 50 years</td>
<td>3.1</td>
<td>2.8</td>
<td>2.8</td>
<td>3</td>
<td>2.6</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Note: Emigration frequency is the number of people born in Greenland who emigrate as a percentage of the total population born in Greenland. Immigration frequency is the number of immigrants born in Greenland as a percentage of people born in Greenland and resident in Denmark.
Source: Statistics Greenland and Statistics Denmark

The persistent net emigration from Greenland has consequences for society and for the economy. Emigration reduces the supply of labour with negative consequences for employment and growth in the longer term, and public tax revenues fall when people of working age decide to move away from the country.

For some, the stay abroad will be short, e.g. in connection with education, training and job opportunities, and they return with new qualifications.

For others, the stay in Denmark will be more permanent. There are many reasons for this; work, family and also social. A closer examination of the situation for people born in Greenland, who have moved to Denmark since 1993, and who were at least 18 years-old when they arrived in Denmark.
shows, for example, that for a minority of these there are signs of social migration. More than one-fifth have no fixed attachment to the Danish labour market and they are on disability pensions or cash benefits. This is a well known issue and is not addressed in this report.

The analysis also shows that the large majority of people born in Greenland of working age in Denmark have a relatively high level of education (compared with the level of education in Greenland) and they have the same high attachment to the labour market as Danes generally, see Technical Background Memo on people in Denmark born in Greenland. There are about 5,700 people who have emigrated from Greenland after turning 18 and who often, after completing a Danish educational programme, find a job on the same terms as others on the Danish labour market. This is a significant resource for society, which has decided to live in Denmark more permanently.

The analysis also shows that the likelihood of moving back to Greenland falls drastically after some years in Denmark. A comparison with people in Denmark from the Faeroe Islands and Iceland shows that mobility out of Denmark is about equal for the three immigrant groups for the first couple of years in Denmark. After this, there is a clear difference and the mobility of immigrants born in Greenland more or less stops, while Faeroese and Icelandic immigrants continue to move away. The figure indicates that if an immigrant does not move away (to Greenland) from Denmark again within four years, on average the person will remain in Denmark. After ten years, on average 60% of Greenlandic immigrants are still resident in Denmark. The same applies for only just under 40% of immigrants from the Faeroe Islands and around 25% of Icelandic immigrants.
Figure 3.11 Average movements for people born in Greenland, the Faeroe Islands and Iceland

Note: The figure shows the percentage of immigrants in Denmark who remain in Denmark measured by number of years after entry. The figure includes people who move from Denmark and back again for the years in which they live in Denmark.
3.4 Return migration

The high level of net emigration and in particular the level for return migration, raises important questions. Firstly whether there is a "brain drain" as the better educated young people emigrate. Secondly whether it is possible to reverse this trend by creating good business development and job opportunities in connection with exploitation of natural resources.

The previous section has detailed the level and composition of immigration and emigration, but it provides no direct answers to the reasons behind the figures. Within the scope of this report, it has not been possible to make a closer analysis of the drivers behind migration, both with regard to emigration and return migration. There is extensive international literature on migration, especially labour-market integration of immigrants, and this is also relevant in the context of Greenlandic immigration and emigration.

Migration can either be voluntary, in that people seek better or different opportunities in another country, or involuntary, in that people are forced to move (because of war or natural disaster, for example). Voluntary migration can be both temporary or permanent, but in most cases the length of stay and possible return to the parent country are unknown at the date of departure. It will usually be influenced by opportunities in both the host and parent countries. Emigration motivated by education will often be shorter than emigration motivated by labour-market conditions. Emigration motivated by education may, however, be for a longer time than the programme itself because of transition to a job or new family situation (partner, children).

Voluntary migration linked to labour-market conditions depends on the balance between the current standard of living and opportunities in the parent country compared with conditions in the new host country. Standard of living involves financial opportunities, i.e. pay levels and job prospects (unemployment), which determine the expected income benefit of migration. Other conditions such as geographic and cultural (language) aspects, distance to home country, as well as social conditions and welfare schemes are also important factors. Network effects can also play a role; both with regard to knowledge about conditions as an immigrant, and with regard to attractive social factors. I.e. possibility to be close to family, friends and acquaintances in the new host country can make it more attractive to emigrate. This channel can give migration a self-perpetuating effect by making it more attractive for others to emigrate if there is already a network in the new host country. Migration options also depend on immigration regulations.

Empirical studies show that financial benefits are an important driver behind migration. The network effect is also significant, while the significance of generous welfare schemes as a magnet is more
uncertain (see e.g. Pedersen et al. (2008), Giuelietti et al. (2011) and Ruyssen et al. (2012)). There is a high degree of short-term migration (mobility) between countries at the same level of development, while more permanent migration is primarily between countries with large pay differentials (OECD (2008)). Typically there are large migration flows between countries with the same language and cultural background.

In light of these results, it is hardly surprising to find a high level of migration between Greenland and Denmark linked to both education and employment. There is immediate access to the Danish educational system, and Greenlandic citizens are entitled to full social rights when emigrating to Denmark. At the same time, the language barriers are limited for many, and there is good knowledge about living conditions in Denmark. Furthermore, many people will have a network of family, friends and acquaintances in Denmark, and opportunities to exploit an education may be better in Denmark than in Greenland.

The literature on migration mentions four reasons for returning to the parent country (return migration): 1) lack of integration in the new host country, ii) strong preference for the parent country, iii) acquisition of qualifications (education and business experience) and savings to improve opportunities in the parent country, and iv) better job prospects in the parent country. On the other hand, return migration can be curbed by better job prospects in the host country, better standard of living as well as problems linked to return migration such as access to housing, childcare, schooling for children (quality of education) etc.

Even though many elements may influence an individual, this indicates that the overall trends in migration patterns depend on economic developments in the parent country and host country. With a difference in standard of living which is likely to increase, it must be expected that the migration patterns will continue or become stronger. In contrast, business development and a more self-sustainable economy could move the trends in the opposite direction. This effect could arise through less emigration, and/or through higher return migration on completion of education/acquisition of business experience.

There are several examples of countries with an "emigration deficit" which, in connection with favourable economic development, have seen the migration pattern change and those who previously had emigrated have returned to their country of birth (return migration). Two examples are Ireland and the Faeroe Islands. In both cases the population was falling as a result of net emigration, despite a high number of births, corresponding to the trends in Greenland, see Figure 3.2. Increased economic
activity and improved living conditions reversed this development, see Figure 3. From a situation with net emigration, developments changed to net immigration and much of this immigration was driven by return migration. In later years this development has reversed again. Developments in these two countries clearly emphasise the importance of economic development in the home country as a factor in migration patterns. It is also important to note that there was economic progress in both cases before the migration patterns reversed.

**Figure 3.12 Population dynamics, Ireland and the Faeroe Islands, 1987-2012**

Note: The birth surplus is equal to the number of births less the number of deaths. Net immigration is the difference between immigration and emigration.


Migration patterns in and out of Greenland are complex with regard to the qualifications of the workforce. There are many potential students among emigrants and thus people who acquire labour-market-relevant qualifications. If these qualifications are not utilised in the home labour market, there will be a "brain drain". At the same time, through immigration there is a considerable influx of well educated labour, of whom many find employment in the public sector. Although there are no detailed analyses of the issue, it is a reasonable assumption that there has been a net import of qualified labour. With regard to business development linked to exploitation of natural resources, there will be increasing demand for labour throughout the entire qualification spectrum and therefore an increased net immigration is expected of both highly educated labour and less highly educated labour.

Although there is great potential for improvements in the qualifications of the workforce, even within a long time horizon there will be a need to attract qualified labour. Give the close ties with the country,
realistically much of the labour should be procured from Denmark. The ties between the two countries make this possible. Language also plays a significant role in this context. The language barrier is often an important factor in attracting and utilising qualified labour; not least in administrative positions and in the public sector (OECD (2013)). This is an issue for all small countries who face the dilemma between on the one hand protecting and strengthening their own language and culture, and on the other hand accounting for the fact that the educational system and labour market have to follow a two-language or more path. It is important to minimise language barriers in relation to both return migration and attracting foreign labour.

As a large proportion of emigration is linked to acquisition of educational qualifications, and as many of those who qualify do not return, it is clearly likely that emigration will be less if more educational qualifications can be obtained within Greenland. However, this is no simple solution and it is unclear whether this would be appropriate for society as a whole. One requirement is that the education offered is of the same academic level as in other countries. This places great demands on the numbers of teachers, including critical mass in the education system to support professional development and continuity. Because of the resources required, this is not realistic for all educational areas. The loss from the lack of return migration of qualified young people should therefore be balanced against establishing corresponding educational programmes as well as the opportunities this will give the relevant students to exploit their skills and motivation. Furthermore, geographic barriers will not be reduced significantly for a large part of the population because of the large transport distances and dispersed settlements.

A vital element in a self-sustainable economy is a high-quality education system at international level. The basis for this must be established through primary and lower secondary school, upper secondary education and vocational training. Many will have to take their education abroad. The high level of net emigration should be regarded as a symptom of a non-self-sustainable economy and not a cause of it. In the long term, reforms and initiatives to establish a self-sustainable economy are also likely to change migration patterns.

3.5 Conclusion

There is a high level of migration within Greenland entailing a population migration away from settlements and to larger towns. This reflects migration motivated by education as well as a general trend observed in all countries that, in line with economic development and changes in production, the population begins to concentrate around larger urban areas. Whether mobility is high enough cannot immediately be derived from the level of migration, as this should be seen in the context of
opportunities and barriers to mobility on the one hand and the societally appropriate level of migration on the other. The latter depends on business development and employment prospects, but regional and cultural aspects also play a role. However, there seems to be reason to conclude that the most important barriers to mobility are access to housing and qualifications (as determining factors for realistic job prospects). At the same time, possible realisation of a large-scale project will require increased mobility if the project is to comprise a high proportion of local employment. The general requirements for reforms because of education and qualifications as well as housing conditions will therefore be crucial for mobility patterns. Furthermore, there is a need to enhance mobility, and the scheme for mobility benefits could be a good instrument to reassess. An annual DKK 1.6 mill. has been allocated for this purpose, and the conditions to qualify for mobility benefits seem very restrictive. More flexible mobility benefits could help encourage more people to get a job.

The relatively high level of net emigration reflects a "brain drain", and a large proportion of emigrants do very well on the Danish labour market. At the same time, in a number of areas there is a need to attract foreign labour. Therefore, there is a migration paradox, which to a certain extent can be explained by differences in economic development and opportunities on the labour market. The high level of net emigration should be regarded as a symptom of a non-self-sustainable economy and not a cause of it. In the long term, reforms and initiatives to establish a self-sustainable economy are also likely to change migration patterns.
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Material is available (in Danish) from:
http://naalakkersuisut.gl/da/Naalakkersuisut/Departementer/Finanser-og-Indenrigsanliggender/Oekonomisk-raad

Reports:

Economic Council Report, 2010
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Background material:

Technical Background Memo 2013-1: Population movements within Greenland
Technical Background Memo 2013-2: Greenlanders living in Denmark
Technical Background Memo 2013-3: Effect of increased employment on public finances.
Technical Background Memo 2013-4: The sustainability of economic policy