

Global Pressure – Nordic Solutions?

The Nordic Globalization Barometer 2008



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By *Christian Ketels*

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www.norden.org**Nordic co-operation**

Nordic cooperation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and three autonomous areas: the Faroe Islands, Greenland, and Åland.

Nordic cooperation has firm traditions in politics, the economy, and culture. It plays an important role in European and international collaboration, and aims at creating a strong Nordic community in a strong Europe.

Nordic cooperation seeks to safeguard Nordic and regional interests and principles in the global community. Common Nordic values help the region solidify its position as one of the world's most innovative and competitive.

Foreword

In June 2007 the Nordic Prime Ministers held their annual summer meeting in Punkaharju, Finland. Inspired by the discussion during the 58th Session of the Nordic Council in Copenhagen in 2006, the Prime Ministers summer meeting focussed on the dynamics of globalization. In particular they discussed how to cope with the challenges and benefit from the opportunities that arise from globalization. Overall, they shared a positive perception of globalization and decided to deepen and re-define important parts of Nordic cooperation. This included further developing the Nordic model in order to facilitate citizens' future welfare, competitiveness of enterprises, employment and economic growth, as well as a common culture and investment in sustainable development.

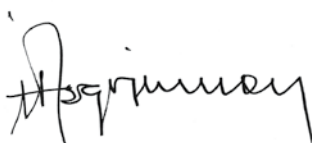
More specifically, the Prime Ministers agreed to launch a number of new Nordic Initiatives addressing pivotal issues in the globalized world. The objective of the initiatives is to enhance a more skilled, visible and thriving Nordic region. The new approach is promoted through the Nordic Council of Ministers and in other forums where the Nordic governments co-operate.

The Nordic region is prosperous – all Nordic countries have higher levels of prosperity than the average OECD-country. Only the United States and Ireland have a higher GDP per capita than the Nordic countries. However, even though we are successful now one important question remains: how can the Nordic countries also in the future continue to be competitive on a global scale?

One of the initiatives, presented by the Nordic Prime Ministers, attempts to find an answer to this question – a Nordic Globalization Forum. From 8-9 April 2008 a Nordic Globalization Forum will take place in Riksgränsen, Sweden. In this context the first Nordic Globalization Barometer identifies central issues related to the dynamics of globalization. Its aim is to spur and inspire a fruitful discussion at the Forum and in the Nordic countries on how our region can be further strengthened. I am very proud to jointly host this Globalization Forum with the Swedish Prime Minister Fredrik Reinfeldt.

Finally, I would like to give my warmest thanks to the author Christian Ketels (Harvard Business School / Stockholm School of Economics) and to the external reference group¹ that has contributed with valuable input to the report. The analysis and conclusions in the Nordic Globalization Barometer are those of the author and do not necessarily reflect the views of the Nordic Council of Ministers. However, I am convinced that the report will be a useful instrument in our future work implementing the globalization initiatives that stem from the Prime Ministers summer meeting in Punkaharju.

Copenhagen, 14 March 2008



Halldór Ásgrímsson
Secretary General
Nordic Council of Ministers

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Executive Summary

The global economy is in the midst of a dramatic change process. The Nordic Globalization Barometer 2008 indicates that the Nordic countries have done well under these new circumstances. Their prosperity has grown from an already high level, based on high competitiveness and strong linkages to the global economy. The region has been a prime beneficiary of globalization – a fact too often neglected in the public debate – and has a significant stake in further global economic integration.

But the Barometer also indicates that the region can not afford to rest on its laurels: The competition is closing in on the region's advantages. And changes in the nature of global business are gradually eroding the benefits of some of the region's strengths while some of its weaknesses are becoming more costly. Many of the necessary changes need to happen at the national or local level, some also in the context of the EU. The Barometer specifically identifies those areas in which Nordic cooperation can make a significant contribution: Regional market integration, global excellence in science, human capital attraction, cluster development, articulating the economic value proposition of the Nordic region, and a fact-driven assessment of globalization can all be effectively addressed through collaboration at the Nordic level.

A Changing Global Economy

The nature of global competition has changed significantly, driven by widespread policy reforms and technological change. Millions of people, mainly unskilled but also many with more advanced training have entered the global labor force. Global demand is shifting towards the needs of the emerging economies. Companies are reorganizing their value chains, including their presence across locations. And locations are faced with more competition, but also larger and more diverse markets to leverage their competitive advantages.

While these changes have opened up many new opportunities and helped to lift millions of people out of poverty, they have also created challenges and raised the sense of uncertainty many people feel about the future. The Nordic Globalization Barometer tracks data on economic performance, competitiveness, and globalization readiness to identify how the Nordic region has done in this changing global economy and what it can do to prepare for the future.

The Performance of the Nordic countries

The Nordic countries have done well in the last few years, increasing the already high standards of living enjoyed by their populations. The Nordic countries have not only defended their position against global competitors, but were successful in using the access to larger markets to boost their prosperity.

The Barometer illustrates how the strong economic performance of the Nordic countries is grounded in the high productivity that companies are able to achieve in this region. Endowments and context are central advantages of this region. The use of its natural resources, the tight regional, the stability



of institutions, and the solid macroeconomic policies make it a global role model. High competitiveness of the business environment is another central advantage, especially in the areas of factor inputs, the science system, the level playing field on markets, and the strengths and sophistication of companies. Many of these advantages have been created over decades; they are not just the result of recent policies. The region also is distinguished by a unique focus on a number of specific clusters, activities, and business environment qualities. This profile might already have boosted overall performance, but it is hard to quantify it more specifically. Despite the considerable strengths, the Barometer also identifies a number of challenges:

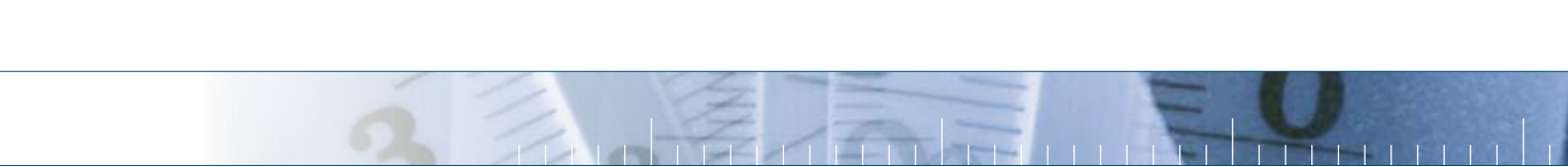
- First, the gap between the Nordic region and other countries in many areas of current advantage is already shrinking, a process that is almost inevitable but can in its speed be affected by policy.
- Second, while the region has many advantages in its competitiveness profile, there are key disadvantages that are likely to become more costly over time. In particular, the high taxation of labor and the compression of wage differentials across skill groups will become more problematic as the mobility of Nordic citizens increases.
- Third, strengths in the basic context and the general competitiveness environment are likely to be insufficient to sustain leading prosperity in the future. To reach the next level of productivity and competitiveness, the Nordic countries need to do more to develop and communicate a reinforcing set of unique qualities.

The Globalization Readiness of the Nordic countries

The Nordic region has been able to benefit significantly from globalization because strong external linkages have enabled the region to leverage its advantages globally.

Companies from the Nordic countries are well positioned in global markets. They register significant exports, are present as investors in many countries, and successfully sell their knowledge abroad. However, their positions in many of these areas are slowly shrinking as other economies are catching up. The Nordic economies have been successful in attracting foreign interest, especially foreign capital, by offering strong capabilities at moderate prices. The track record on the attraction of human capital is weaker. The Nordic economies are flexible in coping with external shocks. Labor market structures are often characterized by strong insiders, but these have mostly contributed to facilitating structural change. Despite the considerable strengths, the Barometer also identifies a number of challenges associated with the strong international linkages:

- First, Nordic companies increasingly serve foreign markets through activities located outside of the region, not exports. This puts pressure on the share of the value added that ends up contributing to Nordic prosperity.
- Second, Nordic countries increasingly need to attract foreign human capital and knowledge, rather than competing based on the capabilities created



in the region alone. Foreign talent, however, is looking for different conditions than those that have attracted foreign companies in the past.

Recommendations

The Nordic region has a significant stake in globalization to continue; as a group of small open economies it would suffer disproportionately from a relapse into economic nationalism. The region's politicians should work towards stable global institutions to support a sustainable increase in economic integration. But the region also needs to further strengthen its ability to compete in the global economy. Otherwise the catch-up of others and the changing demands on successful economies can gradually erode its strong current position.

While many of the necessary changes have to happen at the local, national, or EU level, regional collaboration among the Nordic countries can be significant in a number of areas:

- Deeper regional market integration is critical to overcome the multiple costs of the small national markets;
- global excellence in science is easier to achieve in a regional context;
- human capital attraction is more effective if global talent gains simple access to the entire region;
- cluster development can become more effective through stronger regional competition and collaboration among clusters;
- articulating the specific value the Nordic region offers to businesses can support the positioning of individual regions; and
- a consensus on key elements of globalization at the Nordic level can contribute to more effective national policy debates.



Chapter 1

Introduction

1.1 Why a Nordic Globalization Barometer?

The nature of global competition has changed significantly over the last few years and decades. While these changes have opened up many new opportunities, they have also created challenges and raised the sense of uncertainty many people feel about the future. There are concerns that competition from new rivals in emerging economies could undermine the social model in developed economies. There are concerns whether the current policy architecture of the global economy takes appropriate account of the needs of all developing countries (Rodrik, 2007), not just the emerging economies. And there are concerns whether the current type of economic growth, especially in these emerging economies, is compatible with environmental sustainability.

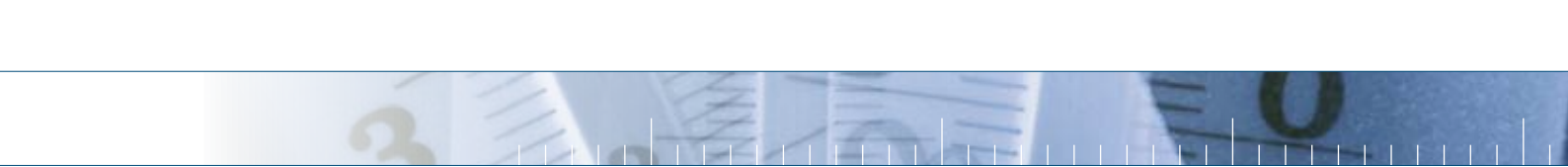
For the Nordic countries, the last few years have brought strong economic growth and an increase of already high level of overall prosperity. But this success has not removed the questions on how the ‘Nordic model,’ the specific set of policies, institutions, and beliefs of the countries in this region, needs to be modernized. At their June 2007 meeting in Punkaharju (Finland), the Prime Ministers of the Nordic countries agreed to launch a common Nordic initiative to further prepare the region for the opportunities and challenges of globalization. This effort complements similar initiatives that the Nordic countries have already pursued on the national level for some time.

The Nordic Globalization Barometer has been launched by the Nordic Council of Ministers to support the region’s policy makers in this new initiative. The Barometer will provide a framework to structure the debate on globalization, collect relevant data on the position of the Nordic countries relative to its global peers, and identify policy issues that are critical to address on the regional level. It will draw on existing data rather than conducting new primary analysis. And it will prioritize issues rather than making specific action recommendations. While the primary audience for the Barometer is politicians and other decision makers in the five Nordic countries, the hope is that the document will also make a contribution to the broader debate on globalization in the wider public.

1.2 The Changing Nature of the Global Economy

The changes in the global economy summarized as ‘globalization’ are fuelled by two key drivers: changes in policy and changes in technology.

In policy, the efforts to reduce barriers to cross-border trade and investment have received most attention. Some took place multilaterally on the WTO level, some among groups of countries, for example within the EU, and some were the result of unilateral liberalization decisions by individual countries. Similarly important, however, were the many changes in other economic policies at the national or cross-national level that improved the business environments of many countries by upgrading infrastructures, removing administrative barriers for the private sector, and launching numerous other efforts to improve competitiveness. These reforms multiplied the number of countries and regions effectively participating in the global economy.



In technology, the reduction of communication and transportation costs has received most attention. Geographic distances can be bridged much faster and at much lower costs than ever before, creating many new opportunities for spreading economic activities across locations. Similarly important, however, the changes in technology have increased the premium for skills and for applying existing knowledge across many more locations.

Changes in global demand and supply patterns

These changes in policy and technology have broadened the global economy to include a wide variety of locations, not just the advanced OECD countries as before. These emerging economies, due to their size especially China and India, have an important impact on the profile of relative demand and supply in the global economy.

On the demand side, the needs of the emerging economies make up a larger share of global market. This has increased the demand for capital goods and natural resources needed to fuel the fast growth of the capital stock in these countries. More recently, the increase in prosperity levels has also led to significant growth in the demand for food products.

On the supply side, the factor endowments of the emerging economies are becoming more and more accessible for the global economy. Most dramatically, this process has added many millions of unskilled workers to the global labor market pool (Dimaranan et al., 2007). A much smaller but in absolute numbers still significant and growing number of skilled employees is also becoming available.

Together, these changes drive up the prices for natural resources and skills, especially true innovative capacity, as well as complex capital goods. Prices for unskilled labor and standardized goods, however, are systematically under pressure.

Changes in the nature of global business

The nature of global business itself is changing as well, in many ways even more dramatically. And companies react by reviewing what they do and where they do it.

Markets become more global. The location of market demand remains one of the key factors when companies decide where to put their activities. As markets like China, India, and Russia become increasingly important in absolute size and are dominant contributors to many companies' sales growth, new investments naturally shift to these locations.

Value chains become more global and companies less vertically integrated. Locational choices can increasingly be made activity by activity, while in the past political and technological barriers forced the co-location of large parts of the entire value chain in one place. Value chains can also increasingly be broken up across different companies, whether at the same location or off-shore (Baldwin, 2006). This allows companies to build and focus on core competencies or more effectively tap into open networks of innovation (Chesbrough, 2005).



Knowledge becomes more global. Codified knowledge about technologies, operating practices, etc. has become much more widely accessible across locations. Companies react by transferring this knowledge to new locations, either to serve growing new markets more efficiently or to leverage new pools of people with high formal training in engineering and the sciences available at moderate wage levels to pursue R&D activities for other markets (World Bank, 2008).

Capital becomes more global. Advanced economies have been able to access global capital markets for some time, but this opportunity has now dramatically increased for developing and emerging economies as well. Global capital can thus be channelled more effectively to attractive investments in those countries. But it can also finance consumption sprees, leaving macroeconomic imbalances that threaten development. This danger has made financial market liberalization a heavily debated aspect of globalization (Stiglitz, 2003).

Together, these changes have enabled a dramatic reshuffling of economic activities across locations (Venables, 2006). This process has been under way for some time and will continue in the foreseeable future.

Changes in the nature of competition across locations

The changes in the global economy have transformed the context for competition across countries and regions along three dimensions:

The first - and most widely discussed - transformation has been the increase in *competition* across regions. The number of locations effectively competing for economic activity has multiplied. More locations provide more choice in terms of business environment profiles than ever before, spanning economies at different stages of development. And these locations compete for more distinct parts of value chains.

The second transformation has been the increase in regional *specialization*. To succeed in a more competitive market, locations have to enable companies to reach higher productivity. This is only possible if locations concentrate on creating the right conditions for specific types of economic activities. Specialization supports the growth of clusters in which companies can benefit from positive externalities of specialized suppliers, service providers, and even competitors.

The third transformation has been the increase in *linkages* across regions (A.T.Kearney/Foreign Policy, 2007). Successful regions enable companies to integrate in global value chains, access global knowledge, and develop ties to important markets for the type of products and services they specialize in. These new linkages emerge while the old macroeconomic linkages that saw business cycles closely follow the lead of the main OECD economies are weakening (IMF, 2007).

These changes have created opportunities as well as challenges. Regions that succeed in raising productivity through specialization and strong linkages can serve a global market. They gain significantly more leverage from their strengths. Regions with low productivity and weak linkages face only the increasing pressure of more intense rivalry. They are likely to fall behind

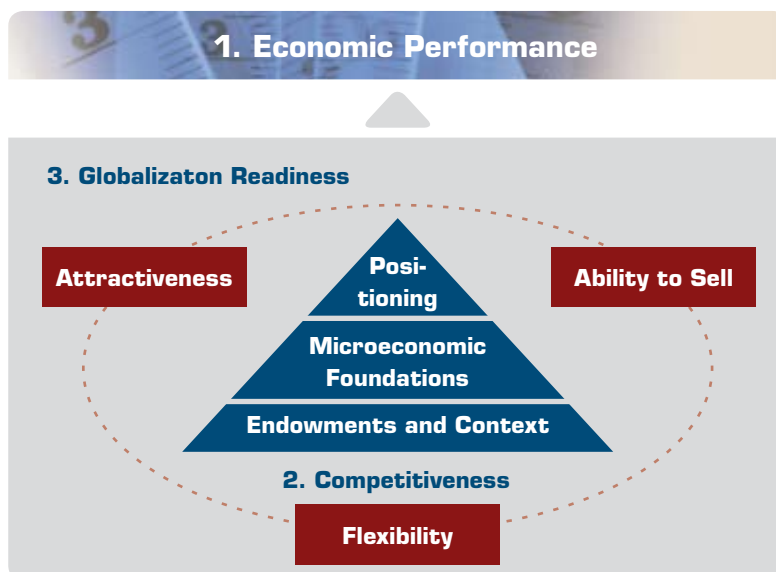
in prosperity even if their absolute business environment quality has not changed. Individuals' experience reflects this combination of opportunities and challenges as well: Everyone gains from globalization as a consumer. As the productivity of the global economy increases, price levels for many products go down and the variety increases. Everyone *can* gain from globalization as a producer, but only if s/he has capabilities or skills that are globally scarce. For those that meet these demands, globalization is a clear net benefit. For those that do not, the net effect might well be negative. In many cases, both categories of people can be found in the same locations, putting pressure on the cohesion of societies.

The available evidence indicates that the winners far outnumber the losers and that many poor are among the beneficiaries. Globalization has enabled millions of people to move out of poverty (Wolf, 2004). But there is also evidence of rising inequality and of countries that fail to benefit from integrating into the global economy. These social costs are the result of the political failure to enable people to meet the global challenges, not of globalization per se (Rodrik, 1997).

Globalization finally increases the pressure to improve environmental sustainability. The more successful globalization is in increasing the prosperity of people, especially the many poor, the higher the demands on scarce natural resources. These environmental costs are the result of the political failure to achieve economic growth that is sustainable, not of globalization per se.

1.3 The Framework of the Nordic Globalization Barometer

The opportunities and challenges that globalization offers are similar for all countries, and the economic principles that guide the appropriate responses are universal as well. But the specific answers individual countries have to develop are the result of the unique conditions that they face. The Nordic Globalization Barometer aims to provide data on these conditions in the





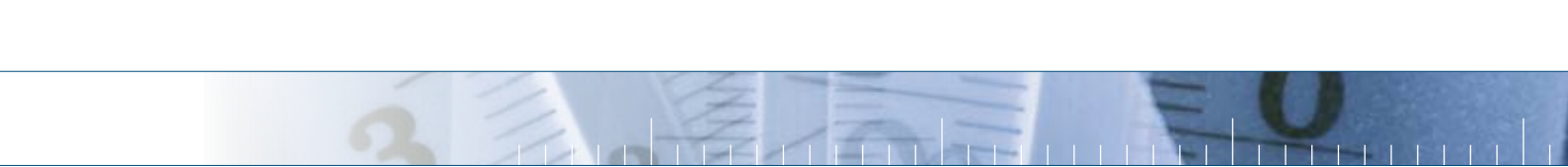
Nordic countries. It evaluates the position of the Nordic countries in the global economy in three main categories: Economic performance, competitiveness, and globalization readiness.

Economic performance, in particular a high standard of living, is the ultimate objective of economic policy. The Barometer tracks overall prosperity measures, including aggregate indicators of social conditions in society. It also looks at the main components of prosperity generation, i.e. labor productivity, labor mobilization, and local price levels.

Competitiveness is the combination of factors that set the level of productivity that companies can reach, the key long-term determinant of the standard of living a location can sustain. The Barometer tracks three categories of relevant factors: First, the endowment, i.e. natural resources and geographic location, and context, i.e. general macroeconomic policies and the quality of general institutions. These factors do not determine productivity directly but influence the opportunities companies face. Second, the microeconomic foundations, i.e. the quality of the microeconomic business environment, the presence of clusters, and the sophistication of companies. These factors influence productivity directly. Third, the positioning of a location, i.e. the unique combination of its economic specialization and the profile of its business environment strengths and weaknesses. These factors enable companies to reap additional productivity benefits by drawing on a clear profile of reinforcing factors.

Globalization readiness describes the ability of a location to successfully engage with the global economy, bringing to bear its full competitiveness. The Barometer tracks three categories of relevant indicators: First, the ability to sell goods, services, and ideas on the global markets. These indicators show whether a country can leverage its capabilities and turn it into prosperity from selling abroad. Second, the attractiveness for global capital, companies, ideas, and people. These indicators show whether a location is a magnet for others that then contribute to value generation locally. Third, the flexibility to manage structural change and react to external shocks. These indicators show whether a location is able to re-allocate resources as global demands change and the exposure to external shocks increase with the density of linkages to other countries and regions.

The Nordic Globalization Barometer aims to strike a balance between accessibility, i.e. being sufficiently brief to enable decision makers to use the data, and relevance, i.e. providing sufficient breadth and depth to enable a meaningful discussion about actions. It draws on existing data and research rather than extensive primary analysis. Given the available data, the Barometer will assess the position of the Nordic countries on each indicator along three dimensions: (a) what is the level relative to peer countries, (b) how have the Nordic countries changed in absolute terms over the last five years, and (c) how has the relative position of the Nordic countries changed relative to peer countries. The positions of the Nordic countries individually and on aggregate are summarized through the simple color scheme below (grey color is used if no data is available). The sources for the detailed data are provided and the data will be made available electronically but is not reproduced in the report.



Green for a position better than the OECD and EU-15 average, or a rank within the global top 10, or an improvement

Yellow for a position between the OECD and EU-15 average, a rank between 10 and 20 globally, or no change

Red for a position below the OECD and EU-15 average, a rank lower than 20 globally, or a deterioration



Chapter 2

Performance of the Nordic countries

2.1 Standard of Living

Integration in the global economy is not an objective per se. It is only relevant because it enables higher standards of living than would be possible in a closed economy. This is why the ultimate test of the ability of a country to succeed in the global economy is the standard of living its citizens can enjoy. The most important indicator to measure prosperity is the average GDP per capita, adjusted by local price differences, the so-called purchasing power parity (PPP). Measures of other factors like basic health and education give a sense of whether economic prosperity translates into a high standard of living. And measures of social inclusions show whether the standard of living is widely shared.

The Nordic countries register a strong position on GDP per capita (PPP). The region overall and each individual country register higher levels of average prosperity than the OECD. Only the United States and Ireland register higher levels of GDP per capita than the Nordic countries on aggregate. Over the last five years, the Nordic countries all registered positive average growth rates of prosperity levels. Their growth rates were also all positive and higher than in the average of the OECD countries. Only Ireland, Greece, Turkey, and the BRIC countries (the largest emerging economies: Brazil, Russia, India, and China) reached higher growth rates. With the exception of Ireland, these countries are, however, at much lower levels of prosperity and fast growth is mainly an indication of their natural catch-up.

Prosperity is measured by GDP per capita, adjusted for purchasing power parity; level data is for 2007, changes for the period 2002 to 2007.
Source: The Conference Board, 2008

Prosperity			
	Level	Growth	Rel Growth
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

A look at the UNDP Human Development Index indicates that the high level of prosperity translates into a high standard of living. Two Nordic countries top the latest HDI ranking and all of them are among the global top 15. All Nordic countries improved their HDI score over the last five years. However, so did all the other high income countries (with the exception of Portugal). Compared to them, only Iceland improved its position, while Denmark stayed constant and Finland, Norway, and Sweden lost some position.

The Nordic countries do well on several measures of social inclusion. Among the EU countries, they report low levels of poverty and of long-term unemployment (which is one of the key reasons for poverty). Since 2000,

the level of poverty has increased in the Nordic countries slightly more than among the EU-15. Poverty is measured relative to the median income, so this is likely the result of the stronger growth among middle- and high-income employees in the Nordic countries. Long-term unemployment has dropped in the Nordic countries over the same time period, with Norway the sole exception. Globally, the latest UNDP data shows low levels of inequality for all Nordic countries (no data available for Iceland), putting them among the top 15 countries by low income inequality measured as the ratio of income for the top 10% of the population versus the bottom 10% of the population. The one area in which the Nordic countries do less well is the integration of foreigners in the labor force. A higher share of refugees in the foreign-born workforce might affect their employability relative to peer countries.

Poverty is measured by the share of people below 60% of the median income after social transfers in 2006. Long-term unemployment is measured as the average share of the labor force that has been out of a job for more than 12 months in 2006. Source: Eurostat, 2008. Immigrant unemployment is measured as the share of immigrants among the unemployed relative to their share in the labor force in 2002/2003. Source: OECD, 2005

Social Inclusion			
	Poverty	Long-Term Unemployment	Immigrant Unemployment
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

2.2 Sources of Prosperity

Prosperity is achieved through a combination of labor productivity, labor input, and local price levels. Labor productivity sets the wage levels that can be defended on a global market. To measure productivity, we look at GDP per hour worked or GDP per employee. Labor input drives the total amount of wealth actually generated. To measure labour input, we use hours worked per capita, a summary measure that captures the impact of demographics, labor mobilization, and actual working times. Local prices translate domestic income into domestic consumption. To measure local price levels, we use purchasing power parity measures that indicate how much a standard bundle of goods and services costs in different countries.

The Nordic countries register solid productivity rates, on average 7% higher than in the EU-15 countries and 17% higher than in the OECD. However, the high value for Norway – driven to a significant extent by the share of oil and gas revenues in the country’s GDP – has an important impact on this result. All other Nordic countries register productivity levels below the EU-15, Iceland even below the OECD. All Nordic countries have registered productivity growth since 2007, and their rate of growth has generally been higher than in the OECD or the EU-15. Norway ranks the lowest on this measure, reaching just the OECD rate.



*Labor productivity is measured by GDP per hour worked; level data is for 2007, changes for the period 2002 to 2007.
Source: The Conference Board, 2008*

Labor Productivity			
	Level	Growth	Rel Growth
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

The Nordic countries position on labor input is comparable to other advanced economies. It is significantly above the level in the EU-15 but slightly lower than in the OECD average. Iceland stands out with more than 1050 hours worked per year and capita. Denmark and Finland follow at significantly lower levels but ahead of the OECD average of 810 hours. Sweden and Norway are further behind but both still ahead of the EU-15. All Nordic countries have seen their labor input grow over time, although in Sweden and Norway this growth has been minimal. These two countries plus Iceland are between the OECD, which has seen annual hours drop marginally, and the EU-15, which has seen an increase by more than 17 hours. Denmark and Finland have seen much more significant increases at more than 30 hours each.

One factor that will drive the labor input in the future can already be forecasted: demographics, i.e. the share of the population that is in working age. The OECD predicts that this share will drop in many countries, including emerging economies like Russia and China, as life expectancy grows and birth rates remain stagnant. The Nordic countries will experience a significantly lower drop than most other OECD countries. The only exception is Finland, which ranks in the bottom third of OECD countries by change in share of population in working age. While the Nordic countries will face significant challenges in managing the impact of the demographic changes on their social systems and economies, these challenges are less daunting than the ones faced by many of their peers, especially the southern European EU members. However, given the larger size of the welfare system in the Nordic countries, action is required.

*Labor input is measured by annual hours worked per capita; level data is for 2007, changes for the period 2002 to 2007.
Source: The Conference Board, 2008*

Labor Input			
	Level	Growth	Rel Growth
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

For many countries, there is a tendency for an inverse relationship between labor productivity and labor input: If barriers exist to enter the active labor force, the least productive employees will be the first to drop out, leaving the remaining labor force to register a higher average productivity. This pattern is also visible for the Nordic countries, but is less dramatic for many other European countries.

Domestic Purchasing Power		
	Level	Rel Change
Nordic		
Denmark		
Finland		
Iceland		
Norway		
Sweden		

Purchasing power is normalized to the EU-27 average; level data is for 2006, changes for the period 2002 to 2006. Source: Eurostat, 2007.

The Nordic countries register relatively high local cost levels. A combination of high taxes, small domestic markets, high domestic purchasing power, and other factors results in high prices. Iceland, Norway, and Denmark register the highest prices. The only other countries that come close in terms of price levels are Ireland and Switzerland. Over the last few years, different countries in the Nordic region have seen their prices develop quite differently. On the one hand, Sweden has seen prices drop relative to the European average, while on the other hand Denmark saw its position deteriorate.

2.3 Overall assessment

The Nordic countries have done well in the last few years, growing their already high standards of living enjoyed by their populations. While many other countries in the world economy have seen a positive development as well, the Nordic countries stand out among the high-income economies.

One of the factors behind this success is that the Nordic countries have been more balanced in the different components contributing to prosperity than most other countries. This explains while they come out on top in the prosperity ranking, even though for example a country like Sweden registers neither very high labor productivity nor labor inputs. European peers like France and Germany register higher labor productivity but have dramatically lower labor inputs.

This positive performance could be driven by domestic factors as well as the changes in the global economy discussed. What is certain, however, is that the Nordic countries have so far been able to at least hold their position against global competitors.



Chapter 3

The competitiveness of the Nordic countries

3.1 Endowments and Context

A first set of factors determining the standard of living are its endowments and its context. Both of them set the general environment in which companies operate but they do not drive productivity directly.

- *Endowments* are natural resources and geographic location
- *Context* includes the nature and effectiveness of general macroeconomic policies and the quality of broad institutions

The Nordic countries benefit from relatively abundant natural resource endowments. Among the prosperous countries in the world, they rank among those that have relatively high per capita exports of natural resources. Norway is in a class of its own, but Denmark, too, ranks among the global top ten by natural resource exports among the countries covered in the Global Competitiveness Report (GCR).

The geographic location and profile of the Nordic countries is not quite as positive. One challenge is the economic size of the own market and of the markets in direct proximity. The Nordic economies are relatively small, despite their high prosperity levels. They are located in some distance to large and fast growing economies. Another challenge is the density of the population. The Nordic economies are not as densely populated as many other high-income countries, and their leading metropolitan areas are relatively small by global standards.

The institutional context is one of the clear strengths of the Nordic countries. They all rank among the top 10 countries globally. This position has stayed pretty much unchanged over the last few years. The stability of the macroeconomic environment as well as the presence of sound public finances and low to moderate levels of inflation are other clear strengths of the Nordic countries. Iceland is the only country suffering from more visible challenges related to macroeconomic overheating and its exchange rate regime. The Nordic countries have enjoyed these positive macroeconomic and fiscal/monetary policy conditions for some years now, only 15 years after

Natural resource exports are measured as the value of unprocessed natural resources per capita, market access as the average GDP per capita of neighbors, and population density by population per surface area. All data for 2006 or the latest year available.

Source: Global Competitiveness Report, 2007

Endowments			
	Natural Resource Exports	Market Access	Population Density
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

struggling with a severe banking crisis, budget imbalances, and exchange rate volatility.

3.2 Microeconomic foundations

A second set of indicators determining the standard of living an economy can enjoy are its business environment quality, the strengths of its clusters, and the sophistication of its companies. All three have a direct impact on the productivity that companies can reach at the location:

Context			
	Institutions	Macroecon. Volatility	Fiscal/Monetary Policy
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

Institutions are measured by the rankings on voice and accountability, lack of corruption, and the rule of law. Macroeconomic volatility is measured as standard variation of GDP growth. Fiscal/Monetary policy is measured by government debt level and inflation rate. All data for 2007.

Source: Global Competitiveness Report, 2007; OECD, 2007.

- *Business environment conditions* include different dimensions of factor conditions and the context for competition
- *Clusters* are measures of regional specialization by companies in related and supporting industries

Company sophistication captures the efficiency of company operations and the distinctiveness of their strategies

Business Environment Conditions

Business environment conditions determine the level of productivity that companies can reach at a location, describe their access to capital and other factors of production to achieve this productivity, and capture the relationship between the private and public returns of their behavior.

The Nordic countries have a strong position in overall business environment quality as measured by the Global Competitiveness Report (GCR). Three of them rank among the global top 5 and the two remaining, Norway and Iceland, rank 13 and 17 respectively. Norway has been able to improve its position over the last few years, while Finland has dropped back somewhat. The other Nordic countries have broadly held their position over time.



Overall business environment quality is measured by the aggregate ranking on national business environment quality in the Global Competitiveness Report in 2007. Relative change is measured by the dynamism indicator for the period 2002 to 2007.

Source: Global Competitiveness Report, 2007.

Overall Business Environment		
	Level	Rel. Change
Nordic		
Denmark		
Finland		
Iceland		
Norway		
Sweden		

A look at individual dimensions of the business environment provides insights into the specific strengths and weaknesses of the Nordic countries. The Barometer focuses on those dimensions that have particular relevance for the Nordic countries.

Education and science

The changes in the global economy have increased the benefits of higher levels of skill. And the ability to innovate is becoming increasingly important to capture significant parts of the value generated in global economies chains. For both, the quality of the local education and science system are critical.

A first indicator is the *quantity and quality of skills* available in a country. The Nordic countries all boast high enrollment rates at all levels of education. The Nordic region takes great pride in the strength of its education system. Educational attainment results of the OECD Pisa study in mathematics provide a more somber picture: While the region overall still outperforms the OECD by a wide margin and Finland tops the ranking, the results for the region overall have been sliding more than in the OECD average. Finland is the exception, not a symbol for education in the Nordic region. Interestingly, all Nordic countries with the exception of Norway have seen stronger improvements in performance among the weakest students, while the strongest students have fallen behind. The results on reading proficiency provide a similar picture.

Educational Attainment: Math			
	Level	Change	Rel Change
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

Level is measured by the point score in the OECD PISA study on educational attainment on mathematics; level data is for 2006, changes for the period 2003 to 2006.

Source: OECD, 2007.

An issue that has more recently come into focus is the incentives that students face when choosing a level and area of education. The data collected by the OECD suggests that students in the Nordic countries face lower incentives to pursue higher education than their peers elsewhere. While there

Level is measured as the first principal component of a country's GCR score for the availability of scientists, the general quality of research institutions, the quality of linkages between academic research and industry, and the patent stock; level data is for 2007, changes for the period 2001 to 2007.

Source: Global Competitiveness Report, 2007.

Science and Technology Infrastructure		
	Level	Rel. Change
Nordic		
Denmark		
Finland		
Iceland		
Norway		
Sweden		

are significant amounts of money available subsidizing students while they are in university, the wage premium that they can expect to enjoy on the labor market after finishing their education is relatively low. This combination creates good incentives to enter higher education but provides weak signals to channel students into those disciplines that will provide high returns in the future.

A second indicator is the *strength of the science and technology infrastructure*, defined here to include the availability of scientists, the general quality of research institutions, the quality of linkages between academic research and industry, and the patent stock. The Nordic countries do well in the Global Competitiveness Report (GCR) estimates in this area, especially in university-business collaboration. In the relative number of R&D personnel, they lead the OECD ranking and have significantly higher growth over the last decade than the OECD and the EU-15. China is now growing its R&D personnel faster and is of significant absolute size, but remains far behind on the share of R&D personnel in the workforce. In terms of the overall indicator, Finland and Sweden both rank in the global top ten, followed by Denmark as 12th. Iceland and Norway come as 19th and 20th, closer to the average of advanced economies. Over the last five years, the Nordic countries have been able to hold their position relative to peers. Denmark and Iceland saw slight improvements, while Sweden lost some ground.

A third indicator is the *size and quality of the scientific output*. The Nordic countries have on average relatively high patenting rates, publish many scientific articles, and receive solid citation rates for their publications. In patenting, most Nordic countries are ahead of the OECD and EU-15 averages in terms of patenting per capita. Norway registers the weakest performance but still ranks on the same level as many other advanced economies. Finland is the Nordic leader, followed by Sweden. In publications, the Nordic countries are strong relative to their population size and average given their number of scientists. In citations, the Nordic countries are all among the global leaders, with Iceland and Denmark behind only Switzerland and the United States. Over the last five years, patenting growth has slowed down but still remained positive for most countries. The Nordic region kept pace with the overall growth. Finland in particular strengthened its position as an international patentor, while Sweden lost some ground. The growth rate of publications remains higher than in the EU-15 and the OECD, but has fallen below the global average, where emerging economies are becoming more important. The citation frequency for articles from Nordic authors has increased (2000



– 2005), especially in Norway while Finland lost some position and Sweden's position remained close to unchanged.

Patents are measured as patents filed per capita in the US, Europe, or Japan. Citations are citations of articles per capita. Level data is for 2006 (patents)/2005 (citations), changes for the period 2002 to 2006 (patenting) or 2000 to 2005 (citations).
 Source: OECD, 2007; Norges Forskningsråd, 2007.

Scientific Output			
	Patents	Citations	Rel Growth
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

The Nordic countries register seven universities among the global top 100, and 16 among the European top 123 (Institute of Higher Education, 2007). Denmark and Sweden dominate, while Norway, Finland, and Iceland have two or less institutions in this leading group. The absolute number of leading institutions is broadly in line with the regions overall economic size. However, the Nordic region has only one academic institution among the global top 50 and among the European top 10.

Infrastructure

Infrastructure remains an important driver of competitiveness and company productivity. While it is for advanced economies increasingly hard to gain true competitive advantages from infrastructure, weaknesses in this area can limit growth and drive economic activities towards alternative locations.

A first indicator is the general quality of the physical infrastructure available. According to the data collected in the Global Competitiveness Report, the Nordic countries are broadly on par with their peers in this category. Denmark and Finland are ranked better, while Norway gets lower marks, which might be related to its geography. Over the last five years, the Nordic countries have broadly held their position in terms of infrastructure, although Finland and Norway dropped by a few ranks.

A second indicator is the presence and quality of the information and communication infrastructure. In many advanced economies, this part of infrastructure has become as important as roads and airports. The World Economic Forum's Network Readiness ranking finds the Nordic countries on the top; all of them rank in the global top ten and three are in the top five. Sweden gained most position over the last year, followed by Norway and Denmark. Iceland was the only Nordic country that lost, dropping by four ranks.

Physical infrastructure is measured by the rank for "overall infrastructure quality" in the 2007 GCR. ICT is measured by the overall rank in the 2007 Network Readiness Index. Level data is for 2006, changes for the period 2002 to 2006. Source: Global Competitiveness Report, 2007, Networked Readiness Index, 2007.

Infrastructure		
	Physical	ICT
Nordic		
Denmark		
Finland		
Iceland		
Norway		
Sweden		

Context for competition

The intensity and nature of competition on domestic markets proves to be another important driver of competitiveness. Without effective competition at home, companies find it hard to compete abroad.

A first set of indicators covers the *strength of market institutions*. The Cato Institute calculates an aggregate index of economic freedom that measures how much of the economy is exposed to market forces and whether competition in those areas is based on strong market institutions. The Nordic region ranks overall better than the EU-15 on this index, but lags behind the OECD. The region suffers from the large size of governments but benefits from its strong institutions securing property rights. It does also do quite well on sound money, regulatory quality, and the absence of trade barriers, although in these three areas there are more significant differences across countries. Norway (as Iceland, which compensates with a smaller public sector size than the other Nordic countries) is drawn down because of higher barriers for international trade. Sweden suffers from lower rankings on different aspects of regulatory costs.

Over the last few years, the overall position of the Nordic region on market institutions has been quite stable. Norway has experienced modest gains, with some up and down over the last five years for which data is available. Sweden dropped slightly more, also with a number of ups and downs over the last few years. In comparison, the EU-15 has lost position, driven by the weak performance of southern member countries, while the OECD did better, roughly keeping its average position.

Market institutions are measured by the aggregate ranking in the Economic Freedom index. Level data is for 2005, changes for the period 2000 to 2005. Source: Economic Freedom of the World, 2007

Infrastructure		
	Level	Change
Nordic		
Denmark		
Finland		
Iceland		
Norway		
Sweden		



A second set of indicators looks at the *nature of product market regulation*. The OECD differentiates the different indicators used to measure this factor along two dimensions, inward- versus outward-oriented policies and administrative versus economic regulation.

The Nordic countries perform overall well on product market regulation. They rank significantly ahead of the EU-15 average and somewhat ahead of the OECD. The region has its relative strength in outward-oriented regulation, i.e. is open to foreign competition, and administrative regulation, i.e. has quite efficient administrations and administrative rules. Norway is somewhat weaker than the Nordic average, but still comes out ahead of the average EU-15 country.

Over the last few years, all Nordic countries have improved the quality of their product market regulation. The gains have been more substantial than for the OECD overall but the EU-15 countries improved even more, coming from a lower level. Denmark and Norway lost ground even to the OECD average, mainly in trade-oriented policies and administration. Finland gained in administration and internal policies and Iceland in trade-oriented policies, both doing overall better than the EU-15 average.

Product Market Regulation

	Level	Change	Rel Change
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

Market institutions are measured by the overall score on product market regulation calculated by the OECD; level data is for 2003, changes for the period 1998 to 2003.

Source: OECD, 2007

A third set of indicators looks at the *nature of actual competition*. The data collected in the Global Competitiveness Report looks at two dimensions: the openness for companies in the market to compete on an equal footing, and the intensity of the competition that is actually present.

The Nordic countries receive good rankings for the nature of domestic competition. All of them are considered to provide equal opportunities for all market participants. The results are, however, not as impressive when looking at the actual level of competition. Only Sweden registers a level of domestic competition among the top ten countries in the world. Iceland ranks 35th, with the other Nordic countries are ranked between 15 and 26. Over the last five years, Sweden has seen the competitive intensity on its domestic market rise, while it stayed relatively unchanged elsewhere in the Nordic countries.

Openness is measured by the first principal component of a country's GCR scores on lack of favoritism by government officials, the efficiency of corporate boards, the strength of IP protection, and the overall quality of property rights. Intensity is measured by the GCR score on intensity of local competition. Level data is for 2007, changes for the period 2001 to 2007.

Source: Global Competitiveness Report, 2007

Nature of Domestic Competition			
	Openness	Intensity	Change
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

Conditions for doing business

There are a number of important dimensions of the business environment that determine whether companies actually take advantage of the opportunities for productive growth that are given by the factors previously discussed. These dimensions include the administrative barriers to run a business, the difficulties in finding external financing, and the ability to privately benefit from running a business. Entrepreneurship is a final dimension that captures the result of these conditions on the willingness to start and grow new companies.

A first set of indicators looks at the *ease of doing business*, i.e. the rules that government sets up to regulate the creation and operation of business and the effectiveness with which government applies them. The World Bank provides in its Doing Business and in its Governance datasets measures on both dimensions.

The Nordic countries rank positively on both dimensions. Compared to other countries, most business regulation is appropriately designed and the effectiveness of government authorities high. On business regulation, Denmark comes out best, ranked 5th in the world, while the other Nordic countries are between 10th and 14th. On government effectiveness, Sweden is at 12th rank the only Nordic country not among the global top ten. On both dimensions, the positions of the Nordic country have been stable over time.

Rules are measured by the overall rank on the World Bank's Doing Business Index. Effectiveness is measured by the overall rank on government effectiveness in the World Bank's Governance database; Level data is for 2007 (Doing Business)/2006 (Governance), changes for the period 2006 to 2007 (Doing Business)/2000 – 2006 (Governance).

Source: World Bank, 2007

Ease of Doing Business			
	Rules	Effectiveness	Change
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			



A second set of indicators looks at the *access to capital* for private companies and entrepreneurs. Capital constraints can be a reason for a lack of private investment even if the potential returns are high. The Global Competitiveness Report (GCR) includes data on financial market quality and on access to risk capital, a source of financing particularly important for entrepreneurship.

The Nordic countries rank positively on both dimensions. They are all among the global top ten countries in terms of overall capital market quality. Access to loans is seen as especially good by the Nordic managers that were surveyed for the GCR. The ranks on financial market sophistication and equity market access are generally lower but still in or close to the global top twenty. Sweden even ranks among the top ten in all financial market categories. In venture capital accessibility, the Nordic countries rank as high as on overall financial market quality. Over the last five years, the rankings of the Nordic countries on venture capital accessibility stayed relatively stable compared to other countries. Only Norway experienced a significant improvement, moving up eleven ranks.

Overall is measured by the first principal component of a country's GCR scores on financial market sophistication, access to loans, local equity market access, and risk capital availability. Risk capital is measured by the rank on the GCR question on risk capital availability. Level data is for 2007, changes for the period 2001 to 2007.

Source: Global Competitiveness Report, 2007

Access to Capital

	Overall	Risk Capital	Change
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

A third set of indicators looks at the *private incentives* that companies and individuals face when running a business. If there is a significant tax wedge between public and private returns, investments might not happen even though they would be socially profitable and there is capital available to finance them.

The Nordic countries have the highest tax share of GDP globally. Only Belgium and France break into the top group of Sweden, Denmark, Norway, and Finland. Iceland ranks somewhat lower, slightly below the EU average but much higher than the OECD average. In personal income taxes, the Nordic countries again rank far on top, with top marginal rates above 50%. Iceland ranks again much lower, even below the EU-15 and OECD averages. For corporate income tax, the picture is very different, with all Nordic countries registering rates below the EU-15 and OECD averages.

Overall is measured by the share of taxes in GDP in 2006. Wage is measured by average individual income tax and corporate by average corporate income tax that year.

Source: OECD, 2007

Taxation Level			
	Overall	Wage	Corporate
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

A fourth indicator capturing the results of these conditions on actual behavior is the *incidence of entrepreneurship*. The Global Entrepreneurship Monitor (GEM) provides an annual assessment of the prevalence of entrepreneurship rates across countries. The GEM finds a u-shaped relationship between entrepreneurship and GDP per capita. In poor economies, entrepreneurship is a necessity to survive while in rich economies it is an individual choice for personal freedom and economic opportunity.

The Nordic countries register only moderate levels of entrepreneurship given their GDP per capita. Iceland is the positive exception, with much higher rates of entrepreneurship, often also with a significant expectation of achieving significant company growth. Norway ranks lowest but this is also a result of the country's high GDP per capita raising the bar in terms of expected entrepreneurship levels. In absolute terms, Norwegian entrepreneurship rates are similar to other Nordic countries and above the level reached in Sweden. Sweden has a relatively low number of entrepreneurs but among them many with high growth expectations. Over time, entrepreneurship rates have moved upwards in Finland but dropped in Norway. In the other countries the changes have been modest and statistically insignificant, much as in the OECD and the EU-15 overall.

Level is measured by share of active entrepreneurs among working-age population; level is for 2006/2007 and growth for period 2002/2003 to 2006/2007.

Source: GEM, 2007

Entrepreneurship			
	Level	Growth	Rel Growth
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

Cluster presence

The presence of clusters, i.e. regional agglomerations of producers, suppliers, services providers, research and educational institutions, etc. related through input-output relations, knowledge spillovers, shared use of input markets, and other linkages, adds to the productivity potential of companies. If there is active collaboration in addition to pure geographic proximity, the strength of these linkages and their benefits for company productivity can be even higher.



A first indicator to get a sense of the strength of clusters in the Nordic countries is the data from Global Competitiveness Report (GCR) on the *presence of related and supporting industries*, an aggregate measure of the availability and quality of suppliers, of capital goods providers, and of specialized service companies. The Nordic countries are seen as strong on overall on these dimensions. Supplier quality gets higher marks than quantity; not surprising given the relatively modest size of the Nordic economies. Sweden, Denmark, and Finland are between ranks five and ten globally, Norway (20) and Iceland (27) follow further behind. With the exception of Finland, all Nordic countries have seen their position on this indicator improve over the last five years.

Level is measured by the first principal component of a country's GCR scores on local supplier quality, local supplier quantity, local availability of process machinery, and availability of specialized research and training services. Level data is for 2007, changes for the period 2001 to 2007.

Source: Global Competitiveness Report, 2007

Related and Supporting Industries		
	Level	Change
Nordic		
Denmark		
Finland		
Iceland		
Norway		
Sweden		

A second indicator to get a sense of the strength of clusters in the Nordic countries is the data from the European Cluster Observatory on the *employment share of regionally concentrated clusters*.¹ The Nordic countries have a lower share of their cluster sector employment in strong regional clusters, i.e. clusters that show significant regional concentration ($LQ > 2$). Finland comes out worst on this measure, reaching only about two thirds of the EU-15 average. Sweden and Norway are slightly below that benchmark, while Iceland is somewhat above. The Nordic countries have on average about the number of strong regional clusters (“stars”) one would expect given their overall share of European cluster sector employment. Iceland and Norway do somewhat better and have more strong regional clusters than the size of their economies would suggest. This data is consistent with the Nordic countries being relatively stronger in clusters that are less employment-intensive. Finally, the Nordic countries have over time roughly kept their share of strong cluster employment. Gains in Norway compensated for losses in Sweden and Iceland.

¹ Denmark is treated as one region which given its size makes comparisons problematic; the country is therefore not included in this discussion.

Share is measured by the share of employment across NUTS-2 regions in the country in clusters with more than twice as many employees as would be expected given the size of the region. Stars are measured by the number of regional clusters that exceed cut-off levels in terms of size, specialization, and regional importance. Level data is for 2005, changes for the period 1999 to 2005.

Source: European Cluster Observatory, 2008.

Employment in Strong Clusters			
	Share	Stars	Share Growth
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

Company sophistication

The sophistication of companies, i.e. their adoption of new management methods and their way of competing, marks the final step to realize productivity levels that are possible given the business environment and the presence of clusters.

The Nordic countries have a strong position in overall company sophistication. Three of them rank among the global top ten and all of them are among the global top twenty. Over the last few years, the position of the Nordic countries on company sophistication has remained relatively stable. The only countries that experienced more significant changes were Norway and Finland. Norwegian companies gained in areas like professional management, staff training, production process sophistication, and the breadth of international market positions. Finnish companies saw their relative position erode in areas like breadth of international and regional markets and modern management practices.

The nature of competitive advantage on which companies compete, i.e. whether they compete on low costs or on differentiated strategies based on innovation and uniqueness, is one of the most important elements of overall company sophistication. It is an area in which the Nordic countries receive high rankings for their companies, in particular Denmark (global rank 3), Sweden (5), and Finland (9). Denmark, Iceland, and Sweden have been able to improve their ranking on this indicator, while Iceland and Norway essentially held their position.

Level is measured by GCR rank in the company operations and strategy subindex. Comp Adv is measured by the GCR score on the source of competitive advantages. Level data is for 2007, changes for the period 2001 to 2007.

Source: Global Competitiveness Report, 2007

Company Sophistication			
	Level	Change	Comp Adv
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			



3.3 Positioning

In the global economy, good performance across many aspects of competitiveness is a benefit, but often not sufficient to win in the competition among locations. Companies are looking for a specific set of clear strengths, not just average performance in all dimensions. In fact, weaknesses in some areas might be unproblematic, as long as they do not undermine the benefits of a location's unique profile of strengths. What is increasingly important for a location, is a clear positioning that identifies what value it provides for which type of activities and then matches these needs with the relevant business environment and cluster strengths.

There is no generally accepted positioning for individual Nordic countries or the region overall. But there is a set of qualities that are generally seen as particularly important in distinguishing the region from other parts of the world. The selection made for this Nordic Globalization Barometer is meant to be illustrative and wants to inform a debate in the region about the unique profile the region and its countries aims to develop. For each of these areas, we present data that gives an indication as to whether the Nordic region is indeed among the global leaders:

- Innovative capacity
- Test market
- Telecommunications cluster
- Environmental sustainability
- Gender equality

Innovative Capacity

The Nordic region has the ambition to be among the global innovation leaders, providing attractive conditions for innovation activities across many parts of the economy. The framework conditions for innovation are multiple and therefore a number of synthetic measures capturing this multitude have been developed.

The Nordic countries scores high in the European Innovation Scoreboard, a summary index based on roughly 25 indicators related to different dimensions of knowledge creation and use. Compared to the EU-15 average, the region's relative strengths are in innovation drivers, knowledge creation, and innovation & entrepreneurship. Sweden, Finland, and Denmark rank on top of all other EU member countries; within the OECD, only Switzerland moves into this top group on rank two. Norway lags behind both the EU-15 and the OECD. Three Nordic regions are among the top five in the EU Regional Innovation Survey. Over the last few years, Norway, Sweden, and Finland have seen their position deteriorate. Denmark and Iceland have seen slight improvements. The OECD has done less well than the European Union, with especially the US losing some position. The Nordic region overall has been roughly keeping track with the changes in the OECD overall.

Level is measured by the overall score in the summary innovation index. Level data is for 2006 or the latest year available, changes for the period 2002 to 2006. Source: European Commission, 2007.

European Innovation Index			
	Level	Growth	Rel Growth
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

The Innovation Capacity Index (Porter et al., 2007) tracks much more countries, but data is unfortunately available only until 2004. It captures a wider notion of innovation, focussing less on innovation inputs and more on the way companies compete and whether the overall business environment supports innovation-based company strategies.

The Nordic region does well on this Index, with Finland ranked number one and all Nordic countries among the global top 20. The key advantages of the region are in company strategies focused on innovation, the availability of innovation inputs, and the linkages between companies and research. With the exception of Finland, the region gets lower grades for the overall impact of its economic policy environment on innovation. The Nordic region has been able to strengthen its position somewhat since 2001, largely driven by improvements in the broader policy environment in Denmark and Norway.

Test market

The Nordic region is seen as a market in which many new products and services can be tested across different product and service areas. While this quality is closely connected to innovative capacity, it has an own character and might be relevant for different clusters.

The Nordic region provides a combination of relatively wealthy consumers in a market that is small enough to allow for cost-effective testing of new products and services. The composite indicator for demand sophistication in the Global Competitiveness Report shows that these conditions translate into sophisticated market demand. Sweden ranks second on this measure globally, even higher than its overall fourth rank in business environment quality. Denmark and Finland follow in the top ten, Norway comes at 13 and Iceland at 24.

The indicator tracks the behavior of consumers and government as well as the regulatory environment. The Nordic countries are especially demanding in terms of consumers and environmental regulations. As far as these are foreshadowing what will happen in other parts of the world, these stringent rules can be an important element of an attractive test market. The position on consumer sophistication is not quite as pronounced but with two countries in the global top ten and all Nordic countries among the global top 25, the region is still strong. Over the last few years, the Nordic region has experienced a slight improvement in its position on demand sophistication. Norway gained most significantly, driven by a better rank in government



procurement of advanced technology. This is also an indicator where Sweden saw gains. Iceland and Finland dropped, both because of weakening relative consumer and government procurement sophistication.

Overall is measured by the first principal component of a country's GCR scores on buyer sophistication, government procurement of advanced technology, consumer regulation, and the stringency of environmental regulation. Consumers demand sophistication is measured by the GCR score for buyer sophistication. Level is the 2007 rank, change is the change in rank between 2001 and 2007.
Source: Global Competitiveness Report, 2007

Demand Sophistication			
	Overall	Change	Consumers
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

Telecommunication cluster

The Nordic countries' telecommunication equipment cluster is one of the clusters in which countries from the region have global importance. Exports are an important measure of current performance. But given the Nordic regions' profile, patenting and R&D spending are at least as crucial to understand the region's position.

The Nordic region has a strong position in telecommunication equipment exports, a cluster category defined by the Institute for Strategy and Competitiveness in its International Cluster Competitiveness Project. Its global export market share in this category is close to 8%, almost double the 4.3% across all exports. Telecommunication equipment is the fifth largest export category for the Nordic region, accounting for 6% of all exports. And it comes sixth in terms of the region's world export market share. The cluster is not equally present across the region. Finland and Sweden together account for 85% of the region's exports in this cluster, with almost equal shares. This is much higher than their overall share in Nordic exports, which is slightly below 50%. In telecommunications services, the region is slightly less strong (Danish data is not available for this category). Sweden, Finland, and Iceland all have higher market shares in this category than in world exports overall, but the ratio is not as strong as for equipment.

Over time, the Nordic region has lost global export market share in telecommunication equipment. Between 2000 and 2005, it lost a quarter of its world market share. But again the pattern has been highly unequal across countries. Sweden accounted for almost all of the market share losses, seeing its position drop by close to 50%. Norway's relative loss was almost as high but from a much lower initial level. Finland, Denmark, and Iceland, on the other hand, gained position, all by more than 10%. In telecommunication services, the overall position of the Nordic countries remained stable. Sweden and Denmark gained market share, while Norway and Iceland lost position.

Level is measured by the global export market share in this product category relative to the global export market share across all products and services. Growth is change in market share. Level is for 2005, changes between 2000 and 2005. Source: Institute for Strategy and Competitiveness, 2008.

Telecom Equipment Export		
	Level	Growth
Nordic		
Denmark		
Finland		
Iceland		
Norway		
Sweden		

On ICT-patenting, a category defined by the OECD that includes telecom related patents, Finland is highly specialized with a 1.7 times higher share of global patents in this category than it has overall. The Nordic region overall is slightly more specialized in this category than the EU-15 but less so than the OECD. Sweden is at about the Nordic average, with the other Nordic countries far behind. Between 1996/98 and 2002/04, ICT-related patenting has grown at a fast rate and accounts now for more than a third of all patents. In the Nordic countries patenting in this area has become more important as well, but somewhat less than in the OECD and the EU. Denmark, Norway, and Finland have seen the share of ICT-related patents grow even faster than in peer countries. But in Sweden, the largest patentor by far in the region, the share of ICT has dropped even in absolute terms.

Data on private sector R&D spending collected by the UK Department of Trade and Industry shows Nordic Telecom companies well positioned. Nokia and Ericsson rank among the top five global R&D spenders in the technology hardware and equipment category. TeliaSonera and TDC rank 8th and 13th in R&D spending for fixed-line telecommunication. Telenor ranks 3rd in R&D spending for mobile telecommunication. The only other categories in which Nordic companies have similarly strong positions are Forestry and Paper and Industrial Engineering.

Environmental quality

The Nordic region has the ambition to be a leader in environmental sustainability, with high levels of environmental quality and high levels of environmental knowledge that can be turned into competitive advantages on global markets across many clusters.

The Nordic region ranks high on environmental quality as measured by the Yale Environmental Performance Index. Sweden, Norway, and Finland are ranked two to four, behind only Switzerland.. Denmark is in the bottom position of the region, ranking 25th globally. The index differentiates indicators by the impact on human health (e.g. environment-related diseases) or the natural system (e.g. climate change). On health impacts, the Nordic region overall ranks fifth in the world with all Nordic countries among the global top ten. On systemic impacts, the region ranks 10th. Sweden, Norway, and Finland rank among the global top ten. Denmark ranks 85th, with the weakest rankings in areas related to the impact of intensive agriculture.



Overall is measured as the simple average of the human health and the natural system score. The human health score is the weighted average of scores related to six indicators; the natural system score is the weighted average of 19 indicators.
Source: Yale University, 2008.

Environmental Performance Index			
	Overall	Human health	Natural system
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

The Nordic region accounts for a significant share of patents in environment-related technologies (OECD, 2007). Its position in these areas is even stronger than in patenting overall. The OECD differentiates three broad classes of environmental technologies related to renewable energy, solid waste, and automotive emissions. The Nordic region is particularly strong in renewable energy patenting, where it accounts for 8.7% of all patents registered in the US, Europe, or Japan. This is more than 3.5 times the share of the Nordic region in all triadic patenting. Denmark accounts for half of all Nordic patents in this category, with a patent intensity more than 11 times as high as across all technologies. Norway and Iceland are also clearly specialized in this area. In technologies related to solid waste, patenting of the Nordic region is 2.6 times as strong as in patenting in general. Finland is most specialized in this area, but all Nordic countries have more than twice as high a share of patents here than overall. In technologies related to automotive emissions, the Nordic region's position is less significant. But for the region overall and for each individual country the share of patenting in this area is slightly above the share in total patenting. Sweden, the only country with a significant domestic automotive industry, comes out strongest, with a specialization at 1.7 times its overall share of global patenting and close to two-thirds of all Nordic patents in this category.

Gender equality

The Nordic region has the ambition to provide the best gender relations in the world, as a social goal in itself but also as a set of practices that provide companies with the opportunity to benefit from the skills and capabilities of all groups in society.

The Nordic region is a global role model for gender equality. It ranks overall on top in the World Economic Forum's Gender Gap Index, with four Nordic countries occupying the four leading positions. Denmark comes somewhat lower at rank 8th. Despite their strong initial position, the Nordic countries have been able to improve their performance on gender equality over time. With the exception of Iceland, these improvements were even higher than in most other countries.

The Gender Gap index tracks performance in four dimensions: economic participation and opportunity, political empowerment, educational attainment, and health and survival. The Nordic countries are particularly strong in those categories in which there are large differences across countries and

the gender gap tends to be the highest, i.e. economic participation and political empowerment. Economic participation and opportunity are measured by different indicators of gender wage equality and gender ratios in higher managerial or technical positions. In this category Sweden and Norway rank among the global top ten while the other Nordic countries rank between 18 and 23. The advanced economies of North America and Oceania but also a number of former Communist countries are among the leading countries in this category.

*Overall is measured based on the overall gender gap score. Economic is measured based on the sub-score on economic participation and opportunity. Data is for the latest year available, change is relative to the previous year.
Source: World Economic Forum, 2007.*

Gender Equality			
	Overall	Change	Economic
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

3.4 Overall assessment

The strong economic performance of the Nordic countries is clearly grounded in the overall productivity that companies are able to achieve given the conditions they face in these economies. The evidence discussed provides more insights in the specific advantages that exist. It also gives an indication of the challenges ahead.

Endowments and context are central advantages of this region. The way the region leverages its natural resources for economic gain, the tight collaboration in this regional neighborhood, the stability of institutions, and the solid macroeconomic policies are seen as a role model by many other countries in the world. Competitiveness is another central advantage, especially in the areas of factor inputs, the science system, the level playing field on markets, and the strengths and sophistication of companies. Many of these advantages have been created over many decades; they are not just the result of recent policies. Positioning, or rather the areas subjectively picked for this report, points towards the unique profile of this region. This profile might already have boosted overall performance, but it is hard to quantify it more specifically.

Given these considerable strengths that underpin the strong current economic performance, what are the main challenges facing the Nordic countries? First, the gap between the Nordic region and other countries in many areas of current advantage is almost inevitably going to shrink. And there is already significant evidence that this is happening. Part of this is the natural process of catch-up and should not be seen as a failure of policy. But in areas like infrastructure it is important to make sure that the catch-up is not exacerbated by a failure to develop the Nordic region in line with the needs of a growing economy.



Second, being a small region at the periphery of Europe – a continent that just for demographic reasons is very likely to see its share in the global economy fall over time – has costs in terms of lower intensity of competition on domestic markets and fewer opportunities to reach critical mass in clusters. While the small size of the region can not be changed, the Nordic countries can reduce its costs by integrating their economies even more aggressively than in the past.

Third, while the region has many advantages in its competitiveness profile, there are key disadvantages that are likely to become more costly over time. In particular, the high taxation of labor and the compression of wage differentials across skill groups will become more problematic. High-skill individuals are getting more mobile, a fact already visible in the data on foreign professionals and PhD students, and might in larger numbers look for better economic opportunities abroad. And the absence of clear economic signals contributes to educational choices by students that do not reflect the needs of the economy, leading to a prospect of increasing skill shortages.

Fourth, strengths in the basic context and the general competitiveness environment are likely to be insufficient to sustain leading prosperity in the future; countries need to develop clear profiles of strengths that support a distinct positioning in the global economy. The Nordic countries have the ingredients to do so. Clear advantages exist in areas like gender relations and the environment; the task is to better leverage these advantages for economic benefit as well.

The globalization readiness of the Nordic countries

4.1 Selling on global markets

The global economy provides unprecedented opportunities for locations and companies to leverage their competitive advantages on a global scale. The most traditional way to do so is through the export of goods and services produced. But as value chains become more global, new ways of capturing value have become important as well. Knowledge can be sold directly in the form of licences and royalties. Outward foreign direct investment, i.e. the investments made by companies from the Nordic countries elsewhere, can leverage domestically gained competitive advantages abroad.

Importantly, the ability to sell in global markets – in whatever form – is not only a sign of competitive strength. It also contributes to domestic competitiveness by exposing companies to more intense competition and providing access to foreign knowledge.

Exports

The Nordic countries register a world export market share of roughly 4%, about 70% higher than their share of global GDP (WTO, 2007). For Iceland, this ratio is significantly lower but all other Nordic countries are close to this level. For small economies a high share of exports relative to GDP is natural. Adjusting for the size of the economy, the Nordic countries' share of the world exports is broadly as expected. Over the last few years, the Nordic countries have roughly defended their overall world export market shares. Since their share in world GDP has grown, however, this led to a drop in the Nordic countries' relative market position. Most other advanced economies have lost world market share to emerging economies, with the notable exception of Germany.

Sweden, Denmark, and to a smaller extent Finland register a significant surplus in their technology balance of payments (OECD, 2007). The technology balance of payments captures royalties and other fee income for the use of patents, trade marks, and other intangibles. For Norway, this measure is only marginally positive.

Level is measured by 2006 world export market shares relative to world GDP share, controlling for total GDP size. Growth is measured by change in export market share, relative growth is measured by the change of world export market share relative to GDP share; 2000 to 2006.
 Source: WTO, 2007

Exports World Market Shares			
	Level	Growth	Rel Growth
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			



Outward Foreign Direct Investment

The Nordic countries register a high level of outward FDI stock (UNCTAD, 2007). Only Denmark registers a lower outward FDI stock relative to GDP than the average of OECD or European countries. Sweden comes out high in top, followed by Norway and Iceland. In terms of growth over the last few years, the situation is different. All Nordic countries have registered rising absolute outward FDI stocks. But relative to their share in global GDP, only Iceland and Denmark increased their share of the global outward FDI stock. The change has been particularly striking for Iceland. Norway's position dropped the most, followed by Finland. Sweden's position also dropped somewhat but the change was similar to the average of EU-15 countries.

Level is measured by 2005 world outward FDI share relative to world GDP share, controlling for total GDP size. Growth is measured by change in outward FDI share, relative growth is measured by the change of outward FDI share relative to GDP share; 2000 to 2005.

Source: UNCTAD, 2007

Outward FDI Stock			
	Level	Growth	Rel Growth
Nordic	High	High	High
Denmark	Low	High	High
Finland	High	Low	Low
Iceland	High	High	High
Norway	High	Low	Low
Sweden	High	Low	Low

The Nordic countries have four entries among the 100 top transnational corporations by foreign assets identified by UNCTAD. That is roughly in line with the region's global share of GDP but most likely understates the presence of global headquarter functions in the region. Sweden, in particular, has a significant number of multinationals relative to the size of its economy. The Nordic region has nine companies among the top 100 European companies by market capitalization identified by the Breugel Institute; more than the region's share of GDP.

4.2 Attracting global interest

In the global economy, no economy can compete based on its own inherent resources and capabilities alone. It also needs to attract investment capital, human capital, and ideas. And it has to retain its own companies and people as far as they can choose where to invest or live and work. Attracting global interest is both an indicator and enabler of global competitiveness, just like the ability to see internationally: Only competitive locations are able to attract foreign interest. And the inflow of foreign capital and skills makes a location more competitive.

Capital attraction

The ability of a country to attract foreign direct investment and the total share of a country in global fixed investment relative to GDP give an indication of where global money is flowing.

Level is measured by 2005 world inward FDI stock relative to world GDP share, controlling for total GDP size. Growth is measured by change in inward FDI share, relative growth is measured by the change of inward FDI share relative to GDP share; 2000 to 2005.
Source: UNCTAD, 2007

Inward FDI attraction			
	Level	Growth	Rel Growth
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

The Nordic countries, especially the two largest economies of Sweden and Denmark, have been able to attract a significant stock of foreign investment relative to their size (UNCTAD, 2007). This is testament to the attractiveness of these countries to foreign investors as well as to their openness to allow foreign investors to buy domestic companies. Finland and Iceland have a relative level of foreign investment that is similar to many other economies. In Norway, this indicator is significantly lower. While this is in part driven by the share of oil in GDP, natural resources often also attract significant foreign investment. Over the last few years, most Nordic countries have seen their share of the global inward FDI stock shrink. While Europe as a whole also lost some position, the deterioration was much more visible among the Nordic countries, especially Norway and Denmark. Iceland has on the contrary been able to improve inward FDI, driven by single investments in aluminum smelters.

Fixed capital investments in the Nordic countries are broadly in line with the level of size and stage of development (EIU, 2007). The share of investment in GDP is small but overall not dissimilar to most other advanced countries, suggesting that the capital stock already is very high and additional investments happen more in immaterial assets like R&D and branding. Iceland is an exception, driven largely by the huge, but ultimately one-off, investment in aluminum plants. Over the last few years investment rates have fallen, despite the recent cyclical upswing. But the Nordic countries were not exceptional relative to other advanced economies at similar stages of the business cycle.

Human capital and Knowledge Attraction

Human capital and knowledge attraction can take many different forms. For human capital, the presence of foreign PhD students and professionals is a useful indicator. For knowledge attraction, the presence of foreign institutions among domestic patentors and the share of patents with foreign co-patentors are useful indicators.



For the share of foreign PhD students, the Nordic countries are in the lower middle group of those OECD countries for which data is available (OECD, 2007). Finland ranks even lower, ranking 17 among 22 countries. Over the last few years, the share of foreign PhD students has grown in almost all countries and the Nordic countries have not been an exception. Especially Norway has been able to attract more foreign interest than in the past. Relative to the average of advanced economies, Norway has been able to gain ground while Finland lost position and the other Nordic countries held their place. The Nordic countries rank quite low when it comes to the share of foreign citizens among what the OECD calls ‘professionals and technicians’. Sweden ranks at 8.1% higher than the EU-15 average (6.4%) but below the OECD (9.6%). Norway, Denmark, and Finland rank even below the EU average, with Finland at the regional bottom at 2.1%

Level is measured by the share of foreigners among PhD students in 2004. Growth is measured by the absolute change of this ratio relative to 1998. Rel Growth is measured by this change relative to the change across the OECD. Source: OECD, 2007.

Foreign PhD Students			
	Level	Growth	Rel Growth
Nordic			
Denmark			
Finland			
Iceland			
Norway			
Sweden			

Foreign patentors play a significant role among the patentors located in the Nordic countries that register their patents with the US PTO (US PTO, 2007). Only in Finland is patenting completely dominated by domestic institutions, predominantly Nokia. For the other Nordic countries, between 10% (Denmark) and 20% (Norway) of the patent applications in the U.S. are made by foreign-owned entities. Companies from other Nordic countries tend to play a prominent role, but so do foreign companies from outside the region. Patenting involving foreign co-patentors provides a similar picture (OECD, 2007): The Nordic countries register more foreign co-patenting than the EU or the OECD. However, this is also driven by the small absolute size of the countries and their total patenting: Countries with large numbers of patents rely less on foreign co-patentors. This is also true in the Nordic region, where Sweden and Finland, the countries with the highest patenting number and intensity, register the lowest number of foreign co-patentors.

4.3 Flexibility in adapting to global changes

The ability to adapt to changing conditions is increasingly important in the global economy. While this is sometimes seen as a contradiction to the need for specialization, it is in fact closely connected to it. Regional economies can only succeed in the global economy if they reach the high level of productivity that economic specialization is needed to achieve. But specialization in turn exposes regional economies to the impact of external shocks. High levels of prosperity can only be sustained where regions are able to transfer their productive resources to new economic activities. In the short term, being more flexible can seem as a disadvantage as companies find it

less costly to reduce employment in flexible rather than in rigid economies. In the long term, however, it creates much more attractive conditions for companies to make investments that create competitive employment opportunities.

Closing a Business

The World Bank measures the cost of closing a business both in terms of the actual cost and the time consumed by the process.

The cost of closing a business is low to modest in all Nordic countries. Denmark, Finland, and Norway rank among the global top ten and Sweden is as the lowest ranked Nordic countries still among the global top twenty. The relevant data has only been compiled since 2006, so changes are small. Denmark, however, registered a significant improvement between 2006 and 2007.

Cost of Closing a Business		
	Level	Growth
Nordic		
Denmark		
Finland		
Iceland		
Norway		
Sweden		

*Level is measured by the 2007 rank in the Doing Business indicator on closing a business. Change is measured by the change in ranks since 2006.
Source: World Bank, 2007*

Labor Market Flexibility

Labor market flexibility is measured both by the World Bank and, for a smaller sample of countries but a wider array of indicators, by the OECD.

The World Bank constructs its overall index based on a review of rules in place for hiring, firing, setting work hours, setting employment conditions, and the non-wage labor costs of employment. In this index, the Nordic countries reach widely different ranks. Denmark registers the highest level of labor market flexibility, ranking among the ten most flexible economies in the world. Iceland reaches a medium rank at 42. Norway, Sweden, and Finland, however, register high levels of rigidity, ranking between 94 and 127.

The OECD includes wider measures of structural unemployment and differences in labor market performance across groups in the labor force. It separates its ranking into two main components, one related to flexibility and one related to the power of insiders. For Sweden and Norway, this leads to a significantly different view: Both economies rank high on flexibility but also high on insider power. Finland stills comes out neutral on flexibility but also high on insider power. Denmark registers relatively high flexibility (but not as flexible as Sweden or Norway) and very low insider power. Almost all of the European OECD countries register high insider power, the opposite of the non-European OECD countries. On flexibility, however, the differences between these two regional groups are much less pronounced.



World Bank is measured by the 2007 rank in the Doing Business indicator on labor market flexibility. OECD is measured by their aggregate measure of labor market flexibility. Source: World Bank, 2007; OECD, 2007.

Labor Market Rigidity		
	World Bank	OECD
Nordic		
Denmark		
Finland		
Iceland		
Norway		
Sweden		

4.4 Assessment

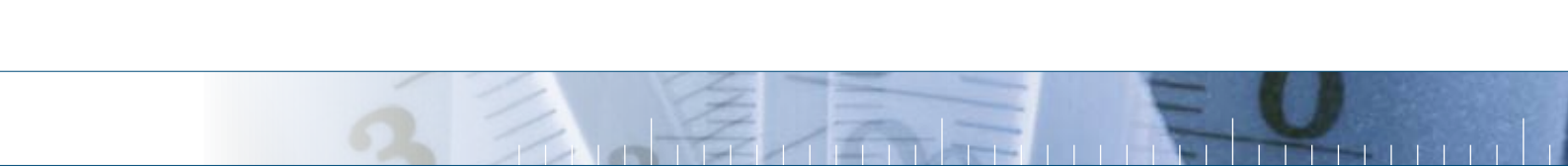
The Nordic region has been able to benefit significantly from globalization. It has many advantages to offer as was discussed in the section 3. And, as this section has shown, it is well linked to the global economy which has enabled it to leverage these advantages across many geographies.

Companies from the Nordic countries are well positioned in global markets. They register significant exports, are present as investors in many countries, and successfully sell their knowledge abroad. However, their positions in many of these areas are slowly shrinking as other economies are catching up.

The Nordic economies have been successful in attracting foreign interest, especially foreign capital. The presence of a well developed science system and compressed skill premia have made Nordic researchers and research institutions attractive partners for R&D collaboration and attracted foreign companies to set up R&D operations in this region. The track record on the attraction of human capital is weaker, despite some recent improvements.

The Nordic economies are quite flexible in coping with external shocks. Formal exit barriers are low and the capital markets are able to reallocate capital to new industries. Labor market structures are in most Nordic countries characterized by strong insiders, especially powerful labor unions. But these unions have used their power largely to facilitate and manage structural change, rather than oppose it as has happened in other advanced economies.

Given these considerable strengths that have made the Nordic countries important participants of the global economy, what are the main challenges facing the Nordic countries? First, as companies from the Nordic countries internationalize, the task is to find ways to make sure that their international success continues to benefit their Nordic home bases. Further raising the attractiveness of the Nordic region to them is the key. But there might also be other steps that can ensure that a disproportional amount of benefits continues to flow back to the Nordic region.



Second, the main attraction of the Nordic countries has been their strength in mobilizing domestic capabilities and allowing foreign companies full access to them. The task is now shifting towards attracting more foreign capabilities to contribute to the region's competitive capacity. The region has a number of draws – in particular its high quality of life, a factor that is becoming increasingly important for mobile high skilled employees – but it also barriers like the tax system. So far, this has on balance led to an amount of human capital inflows that is unlikely to be sufficient in the future.



Chapter 5

Conclusions

5.1 Key findings

As many similar studies, the Nordic Globalization Barometer finds that the Nordic region is doing well economically. It tops international rankings on economic performance and the standard of living. The data reveals that the success of the Nordic region is the result of the strong competitiveness foundations that have been built by government as well as companies over the last few decades. The Nordic countries have been in the advantageous position of providing exactly those qualities – e.g., stable institutions, solid infrastructure, high skills, knowledge intensity, openness, and flexibility – that have become more valuable in the global economy. And the Nordic countries have been able to leverage these qualities in a growing world market through their well established global linkages and a high degree of domestic flexibility.

Overall, the Nordic Globalization Barometer indicates that the Nordic region has been a clear winner of globalization. It has been able to not only defend its established position against new competition, but it has made significant inroads into emerging new markets. Too often, this link between globalization and the strong current economic performance of the Nordic countries is not visible in the public debate. Globalization tends to be associated instead with the pressure on the Nordic model, the poor conditions in many developing economies, and the increasing environmental burden of a growing global economy. These challenges are real, but globalization is not their root cause, even it might contribute to make them more visible. In fact, in a world with less global integration it would arguably be much harder to address them.

Whether the Nordic region will be able to sustain its high prosperity depends in part on the way the external policy environment will develop. The Nordic region has a big stake in the global economy to remain open and on a path to further integration. As a region of small countries, it would suffer disproportionately if there would be a relapse into trade barriers and protectionism. But the future performance of the Nordic region also depends on how it is internally adopting to a changing competitive environment. Two trends are particularly critical: the catch-up of competing locations and the changing importance of individual elements of the business environment. And the Nordic Globalization Barometer provides evidence to analyse their impact on the region's competitive position.

- *Catch-Up from below*

The Nordic region has been ahead in building the general foundations for strong competitiveness. Strong institutions, solid macroeconomic policies, as well as factor conditions like a well developed infrastructure and a highly skilled workforce have been created over decades and more.

The data in the Barometer indicates that this advantage is waning: on most indicators, the region is doing better in terms of level than it is in terms of changes. Globalization is increasing the room for catch-up growth so this trend is natural and will continue. It is not a sign of policy failure but it creates the policy challenge of how to sustain the current prosperity

advantage in a world of smaller differences in the general foundations of competitiveness.

- *New competitiveness demands*

The Nordic region has been successful in a world where large companies dominated, human capital was largely immobile, and high efficiency was the key challenge. Strong factor conditions, open markets, and attractive company taxation enabled companies to achieve high productivity and good profitability. Well funded governments and strong labor unions created a social system that shared the benefits widely in society.

This system is under pressure. Large companies focus on fewer core competencies, outsource more activities, and increasingly become part of clusters. Human capital is facing more choices and is becoming geographically more mobile, especially among the strongest performers. And value is shifting from providing high efficiency and skill to achieving world-class innovation.

The data in the Barometer indicates that the traditional advantages of the Nordic region do not automatically translate into success under these new conditions. Entrepreneurship and clusters are relatively weak, partly because of the policy environment and partly because of the size of the Nordic economies. The inflow of high-skilled foreigners is relatively low and the integration of immigrants into the labor market problematic, partly because of the policy environment and partly because of the homogeneity of the Nordic societies that has been so beneficial for its success so far. The capacity for innovation is good but there are questions as to whether there is already enough true global excellence rather than just solid quality.

5.2 Key policy implications

The data collected in the Nordic Globalization Barometer suggests that that the Nordic region can not afford to rest on its laurels. The seeds of future prosperity at the top of global competition have to be actively planted; maintaining the current strengths will not be enough. The actions necessary require a long list of integrated actions at different levels of geography – from the local to the EU – and by many different institutions – from government to the private sector.

The Nordic Globalization Barometer aims to identify policy areas important for the future success of the region in global competition in which collaboration on the Nordic level can make a significant difference. This creates a significant action agenda but leaves out crucial policy areas, like taxation and the welfare system, in which the Nordic level can do little more than provide another source for policy comparison and learning.

- *Pursue deeper Nordic market integration*

The Nordic region has done much to integrate over the last few decades, further driven by the integration in the EU Common Market. But companies still perceive the region as a collection of small national markets. This reduces its attractiveness to foreign companies, subdues the forces that drive the emergence of strong clusters, and raises local prices due to lower levels of market rivalry.



Collaboration at the Nordic (and Baltic Sea) level is crucial to achieve deeper market integration and not a substitute for harmonization in the EU context. The remaining barriers are often rooted in the practical application of rules and regulations, not in the decision about policy principals made at the EU level. These barriers can therefore be more effectively addressed by neighbors with a history of collaboration and a high economic incentive to integrate.

- *Strive for global excellence in Nordic science*

Countries in the Nordic region, in the last few years increasingly supported by joint efforts through the Nordic Council of Ministers, have invested heavily into developing a strong science system. But while the region provides a solid scientific base and is growing its position in the global research community, its international visibility as a scientific leader is still limited. This leads companies to look elsewhere for access to groundbreaking innovations and limits the attractiveness for talent.

Intensified collaboration at the Nordic level is crucial to create a fully integrated Nordic science system. The larger size of such a system would enable more competition and specialization across institutions, raise the ability to pursue individual large scale projects jointly, and raise the attractiveness for talent. The integration of the market alone will not be enough – focus on excellence and prioritization of efforts will be needed as well – but is an important condition.

- *Strengthen clusters across Nordic countries*

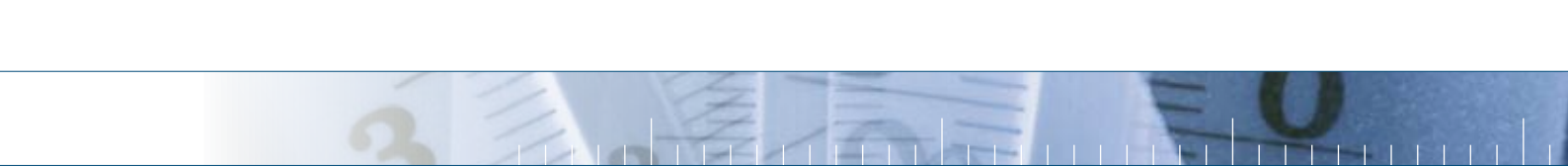
All countries in the Nordic region have over the last few years launched efforts to support clusters and there are strong regional networks of cluster practitioners and policy makers. But Nordic clusters still suffer from relatively modest size and the collaboration between related clusters across the region is modest. This limits the opportunities for companies to leverage clusters as a means to achieve the next level of productivity and innovation, and likely also reduces new business formation.

Regional collaboration can play an important role in improving the quality of national cluster policies and, more importantly, the intensification of collaboration and competition across regional clusters can strengthen the competitive position of clusters with true underlying advantages. Cross-regional collaboration between clusters is especially useful in those areas in which the region overall has a significant position.

- *Attract global human capital to the Nordic region*

The Nordic region has been strong in mobilizing its own capabilities and in attracting foreign companies to tap into them through investments. But with competition heating up, the domestic capabilities are too limited to compete in the areas in which the Nordic countries are operating.

While most of the policy changes required to make the Nordic countries more attractive to global human capital are national in nature, Nordic collaboration can provide support. Promoting the region globally can be more effective than doing it alone. And making it easier for foreign spe-



cialists to change positions across the region can make it more attractive for them to come.

- *Position the Nordic region in the global economy*

The countries in the Nordic region have competed successfully on superior institutions and macroeconomic policies as well as a better general business environment. But with other economies catching-up the pressures is increasing to strengthen the unique aspects of the region that others will be unable or unwilling to copy.

While many aspects of a unique positioning are national or even local, the Nordic region shares a number of qualities discussed in this report that could provide a broad basis for defining the value its economies offer in the global economy. A dialogue on the Nordic level could be helpful to get more clarity on the aspired positioning and the policy consequences this entails. *Foster the public dialogue on globalization in the Nordic countries*

Individual Nordic countries have already taken significant steps to put globalization high on the public agenda. But there remains significant skepticism in the Nordic public about globalization.

While the political debate about globalization is primarily national, the Nordic region can provide a useful additional layer. Establishing a consensus about globalization at the Nordic level can help isolate the findings from partisan arguments on the national level.



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The Nordic region is prosperous – all Nordic countries have higher levels of prosperity than the average OECD-country. Only the United States and Ireland have a higher GDP per capita than the Nordic countries. However, even though we are successful now one important question remains: how can the Nordic countries also in the future continue to be competitive on a global scale?

The first Nordic Globalization Barometer identifies central issues related to the dynamics of globalization. Its aim is to spur and inspire a fruitful discussion in the Nordic countries on how our region can be further strengthened.

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