

2017

STATE OF THE REGION REPORT™

The Top of Europe –
A Competitive Baltic Sea Region
Ready for the Future?

Christian Ketels
Helge J. Pedersen
Mikael Olsson



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BALTIC DEVELOPMENT FORUM STATE OF THE REGION REPORT 2017

Our region is finally on a clear path out of the economic crisis. Competitiveness is still going strong, and the perspectives for growth and employment look promising. The political uncertainties, both East and West, are still present, but have not had a significant impact on the economic development in the Baltic Sea Region. The Region has proven to be a model region for Europe – and beyond – when it comes to regional integration and cooperation. Nevertheless, the report calls for decision makers and political leaders to reinforce their commitment to the regional cooperation framework and to set new ambitious goals for this region to retain its position at the top of Europe.

For the 14th consecutive year, Baltic Development Forum (BDF) is proud to present our flagship report, the State of the Region Report with an overview of how the countries in the Baltic Sea Region (BSR) are performing in terms of growth, innovation and competitiveness. Over the years, the report has provided BSR stakeholders in business, politics and academia with an up-dated outlook for the region's economic performance. It is our aim to inspire decision makers in the private and public sector to further strengthen regional cooperation, harvesting the Region's huge economic potential.

Besides the annual macro-regional outlook, this year's report also takes a sub-national perspective to analyze trends and potentials for sub-national regions around the Baltic Sea. We hope that this will inspire decision-makers and project leaders in regions and municipalities to how they can contribute to and benefit from being part of a macro-region.

Leading towards BDF's 20th anniversary next year, the report will provide a basis for discussions at the 20th BDF Summit in Tallinn on 4th June 2018 as well as the 9th EUSBSR Annual Forum on 4th-5th June 2018, co-hosted by BDF together with the Estonian Ministry of Foreign Affairs and in cooperation with the European Commission.

Our sincere appreciation to the authors of the State of the Region Report, Christian Ketels, Helge J. Pedersen and Mikael Olsson for their substantial and inspiring analysis of how the BSR is performing in Europe and in the global economy.

The report has been made possible thanks to kind support from the Nordic Council of Ministers, and Dr. Ernst Wehtje's Foundation. Also, a sincere thanks to Nordregio for making data-material available for the report. As always, we underline that the views expressed in the report do not necessarily reflect the views of the sponsors.

We wish everybody good reading!

LENE ESPERSEN
Chairman

FLEMMING STENDER
Director

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EXECUTIVE SUMMARY

THE BALTIC SEA REGION IN 2017

The Baltic Sea Region's economy is doing well. Growth rates are up, employment is robust, and the deep crisis before 2010 is starting to fade away. Current conditions are better than what many – including the State of the Region Report 2016 – had expected only a year ago. The political shocks that were the reason for nervousness in the past have not yet materialized. Especially consumers have proven much more relaxed about their threat than professional analysts, keeping up local domestic demand. And monetary policy continues to give significant support with low interest rates and high levels of liquidity provided to the markets.

The more positive results for the current year are very welcome. But many of the challenges discussed in the past remain, and can easily come back to bite. The EU economy, a key driver of economic trends in the Baltic Sea Region, is in a much more robust state than in the past, and the messy experience of the Brexit process has led to growing support for European integration across the remaining 27 EU member countries. But the future of Europe, the way EU member countries decide to organize their collaboration, is to a large degree still unresolved. Economic sentiments are positive and even investment seems to be picking up. But the economic cycle might be nearing its peak, which could leave many economies facing tightening monetary policies just as demand is weakening. And structural changes driven by new technologies and changing patterns of globalisation continue to work their way through the economy, with many of the implications not yet well understood.

As in previous years, the 2017 State of the Region Report provides data and analysis to help decision makers in the Region and observers from the outside navigate this difficult environment. Helge Pedersen, Group Chief Economist at NORDEA bank, discusses the current economic climate across the Region, and gives his view on the trends that are likely to shape the Region's economy in the short- to medium-term. Christian Ketels, member of the Harvard Business School faculty and lead author of the State of the Region Report over the last couple of years, then assesses the Region's economic competitiveness, i.e. the factors that are driving underlying trends in performance over the medium- to long-term. He is supported by Mikael Olsson, a researcher with many years of experience looking at the Baltic Sea Region, in academic circles as well as in government administration. In the last section of this year's Report, Ketels and Olsson then also draw on data from Nordregio and others to analyze in more detail the performance dynamics across sub-national regions around the Baltic Sea.

ECONOMIC CLIMATE, PROSPERITY AND COMPETITIVENESS

The Baltic Sea Region economy is firing on all cylinders; this is the clear impression from the review of the current macroeconomic conditions in this year's State of the Region Report. This is even more impressive given the significant risks that were seen only a year ago, when a number of political shocks had hit. On the back of this strong current climate, prosperity dynamics are healthy. Prosperity growth is strong across the Region, and the catch-up of the less prosperous south-eastern part continues.

However, it remains to be the case that growth dynamics, especially productivity growth, are markedly down since the crisis. And while the most recent data is encouraging, it is hard to interpret the evidence as a return to the pre-crisis conditions. As a result, also the speed of catch-up within the Region has become much slower. This is a real concern given the large differences in prosperity levels that continue to characterize the Region.

Competitiveness fundamentals across the Region continue to be strong. Where issues exist, for example in translating research capacity into economic activity, they have been present for some time. The post-crisis slow-down in productivity and catch-up is thus likely to be driven more by structural changes affecting economies globally than by choices made within the Baltic Sea Region. But even if that is the case, countries across the Baltic Sea Region will still need to find a local and regional answer to these global challenges.

As this year's State of the Region-Report finds, the dynamics are even more heterogeneous at the subnational level, with especially rural regions struggling. Overall the BSR, particularly its more advanced north-western part, does better on providing opportunities also for these regions, than many other advanced economies. But within-country differences and the growing dominance of a modest number of large metropolitan areas, is clearly an issue to be aware of, especially given the low average density across the Region.

LOOKING AHEAD: TIME FOR BSR 2.0?

Collaboration across the Baltic Sea Region is a tremendous success story. It is happily recited in the speeches given by leading politicians across the Region. And it leaves many other macro-regions in Europe and elsewhere impressed, especially if they have themselves learned how hard this type of cross-border collaboration is.

Baltic Sea Region collaboration has achieved many of the objectives that it set out to tackle, particularly with regards to removing the boundaries that had kept the Region apart before 1990. Poland and the three Baltic countries are core members of the EU, and fully integrated economically as well as politically. The relations with Russia remain complex, and especially on security issues they are sadly more acrimonious than in the past. But this is also nothing that originates in the Baltic Sea Region or can be resolved at this level, even if much of it plays out in this Region. With the EU Strategy for the Baltic Sea Region a robust framework for collaboration among the EU members of the Region has been developed. It focuses in its action priorities on key issues that regions and countries around the Baltic Sea are now facing, from prosperity to the environment to connectivity.

The question is what role the Region has for the broader challenges that exist, especially those that require political decisions at the national level. Can it be a platform for introducing common views on the future of the EU into the White Paper process that EU President Juncker has started earlier this year? Can the Region even make a contribution to the global discussion on the future of the international trading system? The BDF Summit in Berlin in June 2017 discussed these issues, based on another BDF Report.¹ The emerging response seemed to be that while the Region can play this role to some degree, it is not really doing so at the moment. Instead, it plows ahead with the operational tasks under existing collaboration structures, especially the EU Strategy for the Baltic Sea Region.

In our view, this is a missed opportunity. The Baltic Sea Region has a unique perspective to offer, and its heterogeneity makes its voice in many respects even more important. And for many countries in the Region working together provides the best hope to be a part of the discussion rather than a mere recipient of the decisions made by others. If the Region wants to embark on such a path, launching Baltic Sea Region 2.0, it will require a clear decision that leaders across the Region are ready to drive this process. It will not be easy. But it has real promise, and it can build on the strong foundations created across the Region over the last three decades.

¹ Christian Ketels, David Skilling (2017), *The Future of Europe and Globalization: Where is the Voice of the Baltic Sea Region?*, Baltic Development Forum/ Tillväxtverket: Copenhagen/Stockholm.

INTRODUCTION

THE BALTIC SEA REGION IN 2017

The Baltic Sea Region's economy is doing well. Growth rates are up, employment is robust, and the deep crisis before 2010 is starting to fade away. Current conditions are better than what many – including the State of the Region Report 2016 – had expected only a year ago. The political shocks that were the reason for nervousness in the past have not yet materialized. Especially consumers have proven much more relaxed about their threat than professional analysts, keeping up local domestic demand. And monetary policy continues to give significant support with low interest rates and high levels of liquidity provided to the markets.

The more positive results for the current year are very welcome. But many of the challenges discussed in the past remain, and can easily come back to bite. The EU economy, a key driver of economic trends in the Baltic Sea Region, is in a much more robust state than in the past, and the messy experience of the Brexit process has led to growing support for European integration across the remaining 27 EU member countries. But the future of Europe, the way EU member countries decide to organize their collaboration, is to a large degree still unresolved. Economic sentiments are positive and even investment seems to be picking up. But the economic cycle might be nearing its peak, which could leave many economies facing tightening monetary policies just as demand is weakening. And the structural changes in terms of new technologies and changing patterns of globalisation continue to work their way through the economy, with many of the implications not yet well understood.

Is there enough forward-looking action to prepare for these challenges ahead across the Region, and is regional collaboration within the Region mobilized as a platform to achieve higher impact? These are the questions that the Report hopes to trigger, providing an evidence-based foundation for discussion. The Baltic Sea Region has achieved a lot in creating common structures, deep-seated linkages, and even a sense of shared identity. But with the Baltic countries and Poland firmly embedded in the European Union the original mission of removing the boundaries that had existed before 1990 has arguably been achieved. It might be time to look again at the motivation and ambition for regional collaboration.

THE BALTIC SEA REGION – A (SMALL) MACRO-REGION AT THE TOP OF EUROPE

For our analysis, we define the Baltic Sea Region – as in previous years – to include at its core the Baltic countries (Estonia, Latvia, and Lithuania), the Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden), northern Germany (Hansestadt Hamburg, Mecklenburg-Vorpommern, and Schleswig-Holstein), northern Poland (Pomorskie, Warminsko-Mazurskie, and Zachodnio-Pomorskie), and most parts of Russia's Northwestern Federal District (excluding the four regions least connected to the Baltic Sea Region: the Republic of Komi, Arkhangelskaya oblast, Nenetsky AO, and Vologodskaya oblast). Other organizations have applied somewhat wider definitions, including for example Belarus and larger parts of Germany and Poland. Our definition focuses on those countries and regions much oriented towards the Baltic Sea Region but for other purposes it can be useful to look at those wider groupings as well.

The Baltic Sea Region as defined here is a so-called 'macro region', a cross-border grouping of countries and subnational regions. While this definition of the Region is informed by economic data, it is ultimately a political choice to define the boundaries of a Region where collaboration is meaningful. Macro regions have become a new level of policy dialogue in different parts of the world, especially in Europe, because they combine two features: They include countries and regions that are through their proximity the most natural partners for trade and investment, and often also compete together for a position in global value chains. And they are through their cultural and political affinity areas in which policy learning and collaboration for competitiveness upgrading is most likely to be effective.

The Baltic Sea Region is in global comparison a small, prosperous macro-region, characterized mostly by the small open economies that make up its Nordic and Baltic core. It is home to close to 60 million people; in population size that puts the Region somewhere between Italy and the UK in comparison. About 45% of the Region's inhabitants live in the Nordics, a share that has been steadily increasing over time as the Nordic countries gained population. 10% of the Region's population live in the Baltics, and the remainder in the parts of Germany, Poland, and Russia bordering the Baltic Sea. All of these latter countries and regions have seen their population numbers slowly decrease, a trend that is likely to continue given the current patterns of demography. The Region generated in 2015 an annual GDP (current prices and exchange rates) of close to €2,000 billion, representing 12.5% of the EU-28 economy. The Nordic countries dominate with about 56% of the total, followed by Northern Germany and North-western Russia at roughly 15% each, the Baltics at 8% and Northern Poland with the remaining 6%.

TAKING THE TEMPERATURE OF THE REGION'S ECONOMY, ASSESSING ITS FUNDAMENTAL COMPETITIVENESS, AND LOOKING AT SUBNATIONAL DYNAMICS

The 2017 State of the Region Report continues to focus on delivering a compact analysis of the Region's economic performance and underlying competitiveness. Helge Pedersen, Chief Economist of NORDEA group, discusses the current economic climate across the Region, and gives his view on the trends that are likely to shape the Region's economy in the short- to medium-term. Christian Ketels, member of the Harvard Business School faculty and lead author of the State of the Region-Report over the last couple of years, then assesses the Region's economic competitiveness, i.e. the factors that are driving underlying trends in performance over the medium- to long-term. He is supported by Mikael Olsson, a researcher with many years of experience looking at the Baltic Sea Region. In the last section of this year's Report Ketels and Olsson then also draw on data from Nordregio and others to analyze in more detail the performance dynamics across subnational regions around the Baltic Sea.

ECONOMIC OUTLOOK

Domestic demand drives economic growth
Capital formation on the rise
Labour markets and public finances
Strong fiscal position



ECONOMIC OUTLOOK

The Baltic Sea Region is in a solid economic upturn. This year economic growth in the region will reach no less than 2.6%, a post-financial crisis high following a gain of 2% in 2016. Next year growth will slow slightly to 2.3%.

Growth has been strong notably in Sweden, Germany, Poland and Iceland, but also Denmark and the Baltic countries are now in a self-sustaining recovery. And Finland, Norway and Russia are back on the growth track. In Norway and Russia this is chiefly driven by higher oil prices.

Domestic demand in particular has been strong in recent years, and several countries are now reporting growing bottleneck problems in the labour market. The extremely accommodative monetary policy stance has been a key catalyst for the upturn. Record-low interest rates have led to rising home prices as well as a surge in construction investment in many countries, and share prices have risen sharply. This has helped to lift consumer spending.

Most countries in the region are small, open economies highly reliant on foreign trade. Following a series of weak years, world trade has regained some momentum, and this benefits the export-oriented businesses of the region. The mutual sanctions between the EU and Russia have worsened interregional trade, but the impact is much less pronounced now than when the sanctions were introduced in 2014. Russia has moreover emerged from recession in the wake of rising commodity prices, and this has boosted trade with the other countries in the region and not least the neighbouring countries.

The baseline scenario for the Baltic Sea Region is rather stable growth of close to 2.5% throughout 2017 and 2018. The risks are fairly balanced. The low level of interest rates improves the chance that the good momentum in the economies can become self-sustaining, and exports as well as investment activity could surprise on the upside. On the other hand, geopolitical risks are rising and the outcome of the Brexit negotiations is highly uncertain.

DOMESTIC DEMAND DRIVES ECONOMIC GROWTH

Over the past years, growth in the Baltic Sea Region has to a large extent been driven by domestic demand and not least consumption. Public consumption grew by 2.3% in 2016 and is expected to grow by 2.4% this year and 2.2% in 2018 while private consumption rose by 2.0% in 2016 and is expected to grow by 2.4% this year and 2.2% in 2018 (Table 1).

Especially the Baltic countries are expected to experience strong growth in private consumption, along with Iceland and Poland.

Private consumption is supported by a very favourable trend in income and wealth due to better employment prospects and strong increases in housing prices and financial assets (Figures 2a-d). This can to a large extent be attributed to an extremely lenient monetary policy in the region, including record-low policy rates (Figure 1).

TABLE 1

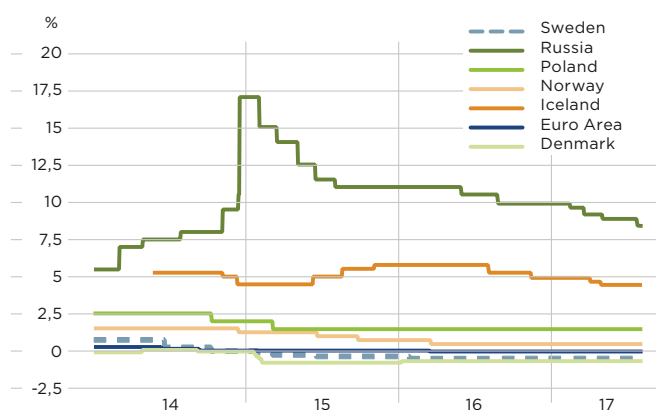
BALTIC SEA REGION, REAL ANNUAL GROWTH RATES UNLESS OTHERWISE NOTED

	2012	2013	2014	2015	2016E	2017E	2018E
Private consumption	1.8	1.6	1.6	2.1	2.0	2.4	2.2
Government consumption	1.1	1.0	1.3	1.9	2.2	1.3	1.5
Gross fixed capital formation	2.5	1.0	1.9	0.6	3.3	5.6	3.6
Exports	2.1	0.9	3.4	3.8	2.4	4.2	3.7
Imports	2.2	2.1	3.5	2.9	3.8	4.5	3.8
GDP	0.9	1.0	1.5	2.1	2.0	2.7	2.3
Inflation, % y/y	1.9	1.7	1.3	1.4	1.5	1.8	1.6
Unemployment, %	6.5	6.5	6.4	6.4	6.2	5.9	5.7
Government budget balance, % of GDP	1.9	1.3	1.1	0.5	0.1	0.6	0.5
Current account balance, % of GDP	5.8	5.5	5.9	5.7	4.6	5.1	4.9

Source: Nordea Markets

FIGURE 1

MONETARY POLICY RATES



Source: Nordea Markets and Macrobond

FIGURE 2A

REAL HOUSE PRICES IN THE NORDICS AND GERMANY

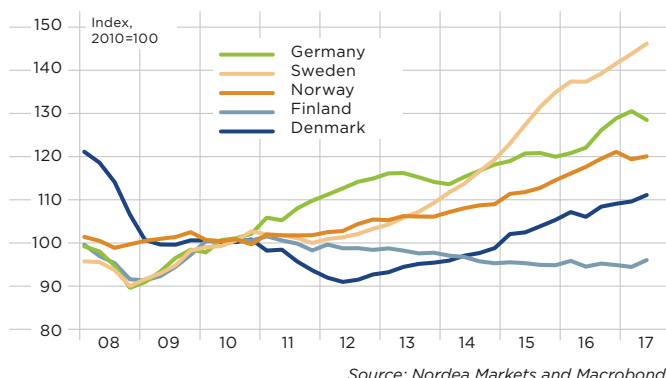


FIGURE 2B

REAL HOUSE PRICES IN REST OF BSR

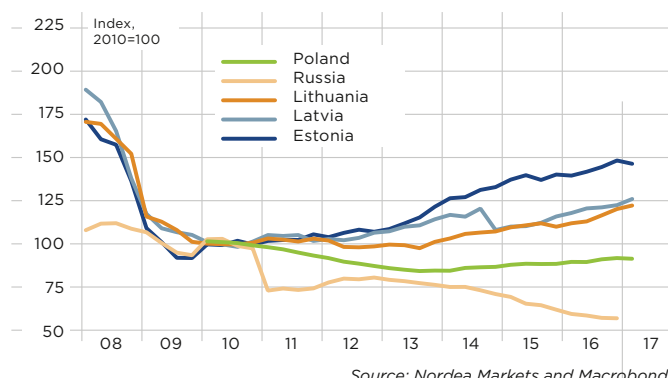


FIGURE 2C

STOCK MARKET INDICES

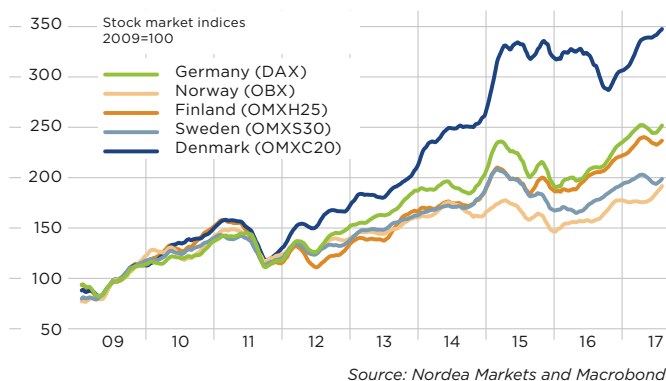
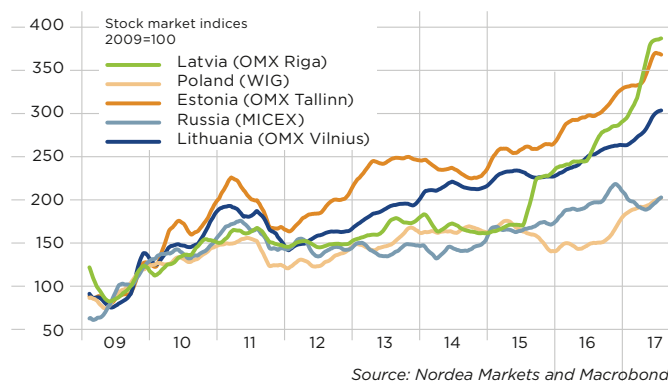


FIGURE 2D

STOCK MARKET INDICES



CAPITAL FORMATION ON THE RISE

Reported increasing problems with hiring qualified labour and improved financing conditions mean that there are reasons to expect that investment activity, which has been a weak spot in many countries since the crises, can pick up again. In 2017 fixed business investment is expected to increase 5.8%, with especially high growth rates in the Baltic countries, after an increase in fixed investment last year of 3.4%, the highest level since 2011.

It is possible that the weak investment activity since the outbreak of the financial crisis should be attributed to structural factors such as demographic trends and the service sector's rapidly increasing importance to the economy as capital intensity is significantly lower in this part of the economy than in manufacturing. If so, it is important that the area's growth potential is promoted through structural reforms to raise productivity growth sufficiently to compensate for the demographic decline in the growth potential.

FIGURE 3

REAL FIXED BUSINESS INVESTMENT

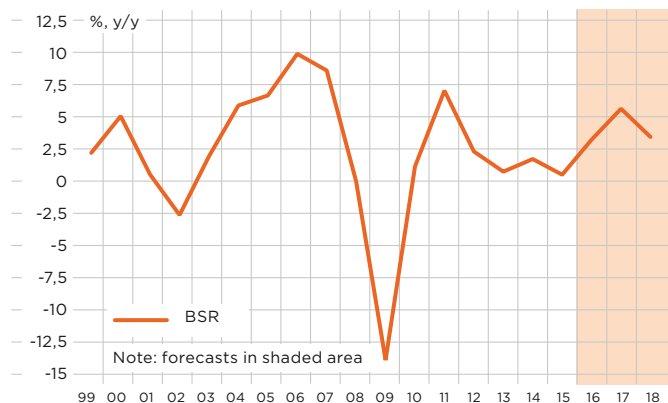
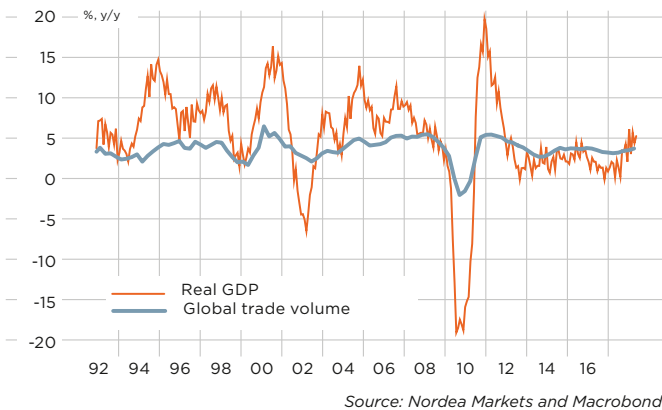


FIGURE 4

GLOBAL GROWTH AND TRADE PICKING UP



SMALL, OPEN ECONOMIES DEPEND ON TRADE

The majority of the countries in the Baltic Sea Region are small, open economies which by nature are very dependent on foreign trade, having foreign trade ratios to GDP even exceeding 100% (Figures 5a, 5b). The region is therefore expected to benefit from the recent increase in global trade and GDP (Figure 4). Exports are expected to grow by 4.3% this year, while imports will increase by 5.1%. Due to an expected slowdown in growth in the Euro area, by far the most important trading partner for the BSR, and uncertainty related to the Brexit negotiations, trade will slow a bit so exports and imports will be growing at just below 4% in 2018.

The Baltic Sea Region continues to post a current account surplus of 4-6% of GDP, a rate that has remained remarkably stable over the past decade. Not least the Scandinavian countries and Germany are running huge current account surpluses – of course reflecting a strong competitive stance but also that the savings ratio is too high or alternatively that the investment ratio is too low in these countries, an issue which is being scrutinised as part of the EU's alert mechanism for macroeconomic imbalances.

FIGURE 5A

EXPORTS PLUS IMPORTS IN % OF GDP

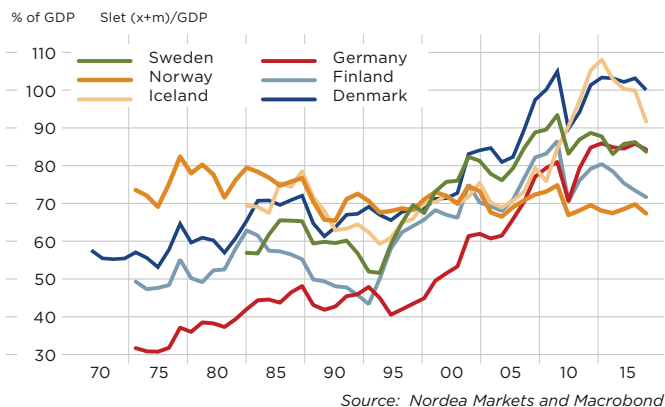


FIGURE 5B

EXPORTS PLUS IMPORTS IN % OF GDP

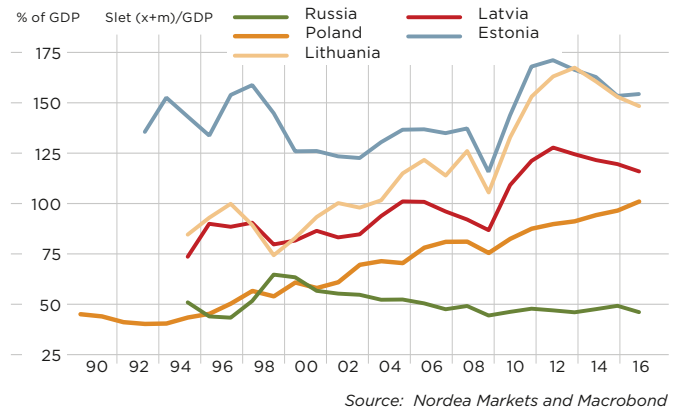
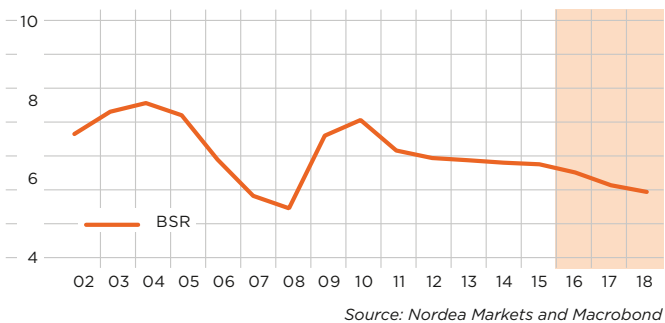


FIGURE 6

UNEMPLOYMENT RATE, %



LABOUR MARKETS AND PUBLIC FINANCES

The strong growth in the region is now very visible in the unemployment rate, which is expected to drop below 6% this year, the lowest level since the outbreak of the financial crisis.

With regards to the individual countries in the Baltic Sea Region, performance varies significantly. The lowest unemployment rates are found in Iceland, Germany and Norway where less than 5% of the labour force was out of work by mid-2017.

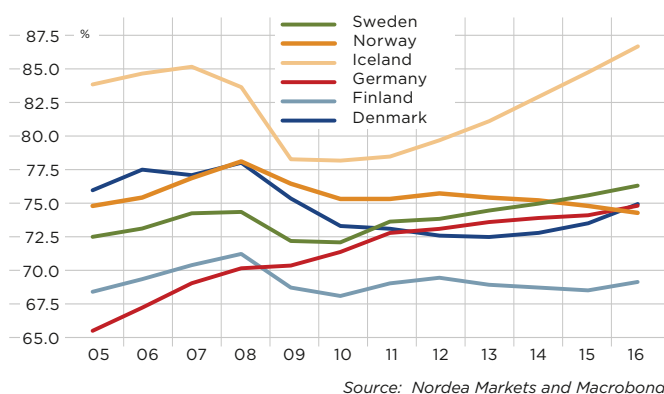
The highest rates are found in Latvia and Finland where unemployment hovers around 8-9%, indicating structural problems in the two labour markets.

A key challenge in many parts of the Baltic Sea region is the high level of youth unemployment (Figure 7). In Finland, Poland, Sweden and Lithuania, youth unemployment rates are 15-20%, whereas Germany and Iceland are the best-performing countries in the region with youth unemployment below 7.5%. In Sweden, the youth unemployment rate is almost three times as high as the labour force average. In Europe, only a handful of countries have wider unemployment rate differences across these segments of the labour market. In the Baltic Sea region, Poland, Norway (at much lower absolute levels) and Finland follow with youth unemployment rates that are two to two and a half times as high as overall unemployment.

However, as the situation in labour markets has improved over the past few years, the employment rate (the ratio of the employed to the working age population) has also increased in several of the countries. Especially Iceland and the Baltic countries have shown sharp increases in the employment rate (Figures 8a,8b), while Finland has shown a flat trend, which highlights its structural problems. Coupled with lower unemployment levels, labour markets are beginning to tighten in some countries and reports about serious shortages of skilled labour are becoming more and more frequent.

FIGURE 8A

EMPLOYMENT RATES



Though labour markets are becoming increasingly tight, the relationship between unemployment and wage growth seems to have changed. More specifically, the so-called Phillips curve, which shows the relationship between wage growth and the unemployment rate, has seemingly moved downward and become flatter as exemplified by Denmark (Figure 9). Here it seems that since 2012 a given rate of unemployment now comes with a lower rate of wage growth. Further, comparing the wage growth rates at the current level of unemployment with the wage growth rate the last time unemployment was at these levels shows that this downward shift in the Phillips curve is visible for most of the countries in the Baltic Sea Region (Table 2). Iceland is the only exception. The subdued wage growth is an important factor in explaining why the overall inflation rate has undershot the target set by most central banks in the region and thereby also an important explanatory factor why monetary policy has been kept so extremely lenient as the case has been.

FIGURE 7

UNEMPLOYMENT RATES - YOUTH AND TOTAL, % OF LABOUR FORCE

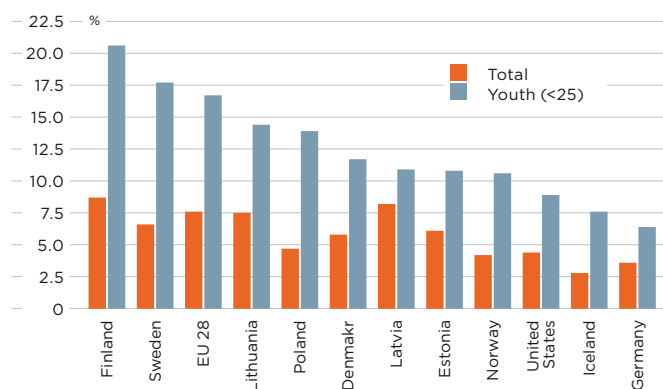


FIGURE 8B

EMPLOYMENT RATES

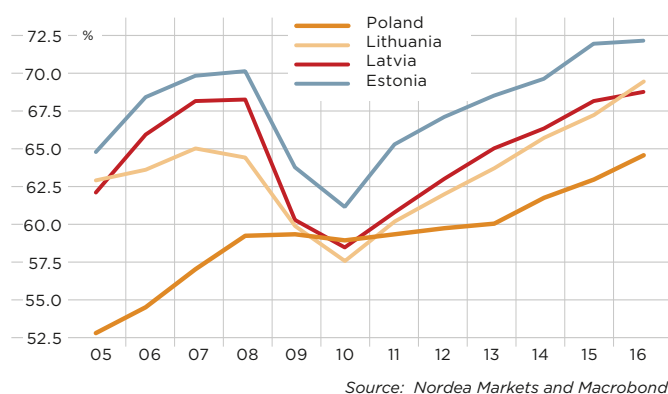


FIGURE 9

PHILLIPS CURVE FOR DENMARK

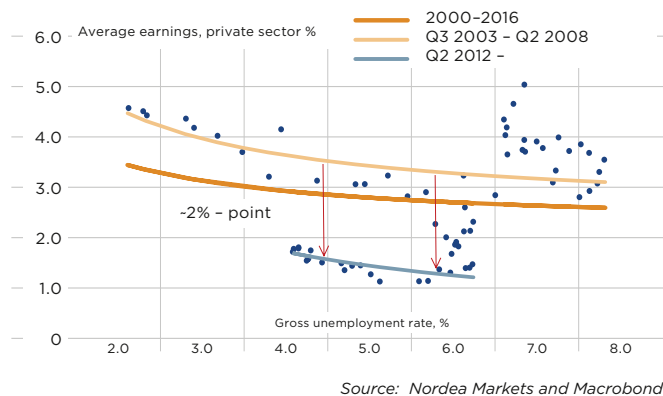


TABLE 2

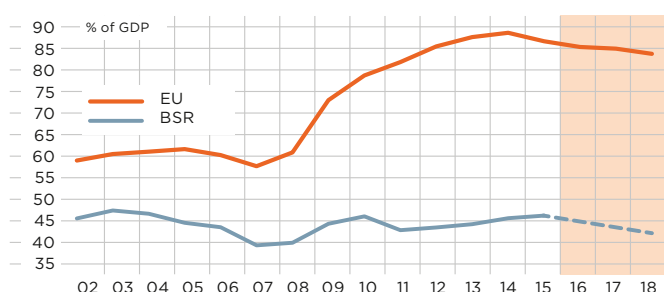
SUBDUED WAGE GROWTH – A NEW NORMAL?

	2016		Last time with same unemployment (+ 1)	
	unemployment rate, %	Earnings, % y/y	Earnings, % y/y	Year
Denmark	4.3	1.8	3.1	2009
Estonia	7.0	5.9	11.9	2005
Finland	9.0	0.8	2.2	2010
Germany	4.2	2.3	3.3	2012
Iceland	3.1	10.8	7.7	2008
Latvia	9.9	6.7	15.4	2005
Lithuania	7.9	8.4	10.6	2005
Norway	4.8	1.8	3.9	2005
Poland	6.3	4.6	10.2	2008
Russia	5.5	8.1	23.7	2007
Sweden	7.2	2.3	3.0	2006

Source: Nordea Markets

FIGURE 10

PUBLIC DEBT IN BSR AND EU



Source: Nordea Markets and Macrobond

STRONG FISCAL POSITION

The strong economic growth and the coherent improvement in labour markets are the major reasons behind the improvement of the overall fiscal position in the region. Higher oil prices have helped Norway to keep a solid surplus of 3.5% of GDP on the government budget balance in 2017. Also Sweden, Latvia, Lithuania, Germany and Iceland are expected to run budget surpluses in 2017, whereas Poland and Russia are expected to run rather large deficits of around 2.5% of GDP. Seen as one, the Baltic Sea region is expected once again to run a healthy overall budget surplus of 0.6% of GDP in 2017.

Germany is facing the largest public debt in the region. The gross debt to GDP ratio is expected to be around 65% of GDP in 2017, only to decrease further to 62% next year, and all other countries in the region are expected to either stabilise or reduce their debt levels in 2017. Furthermore, all other EU countries in the region face debt to GDP levels comfortably within the EU's 60% threshold.

The Baltic Sea Region is actually one of the best-performing regions in the world when it comes to economic governance. It is therefore no wonder that Germany, Denmark, Norway and Sweden belong to the small group of nine countries in the world that have been assigned AAA ratings by the three large rating agencies, Moody's, Standard & Poor's and Fitch.

COMPETITIVENESS OF THE BALTIC SEA REGION

Prosperity outcomes across the Baltic Sea Region in 2017
Economic Activity in the BSR: Trade and investment
Foundations of Competitiveness: the position of the Baltic Sea
Region



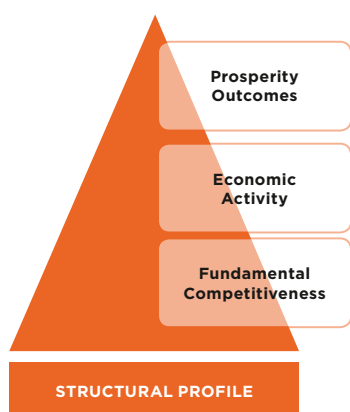
COMPETITIVENESS OF THE BALTIC SEA REGION

What is the level of prosperity that the Baltic Sea Region can sustain for its citizens given its endowments, policies, and resulting attractiveness as a place to do business? This is the key question that our analysis of competitiveness across the Region puts into focus. While the previous section discussed the short-term cyclical movements of the economy on an aggregate level, we are here concerned with the underlying fundamentals and their trends as they drive prosperity outcomes over the medium-to long-term. In line with previous editions of this report, we assess these factors through indicators at three different levels.

First, *prosperity outcomes* give a sense of how competitiveness is reflected in the standard of living, the ultimate objective of

economic policy. Second, indicators of *economic activity* track the translation of competitiveness into ultimate prosperity outcomes, with short-term changes often significantly affected by cyclical factors. And third, *competitiveness fundamentals* are the root causes of these higher-level outcomes and observed indicators, and are the level at which economic policy can most effectively intervene. Because the relationships between individual fundamentals, indicators, and outcomes are multifaceted and complex, an integrated view of all three layers provides more robust insights than overreliance on one individual dimension of data. In addition, the structural profile of the Region – capturing natural conditions that policy makers have to take for given – also has an impact on outcomes and competitiveness dynamics.

HOW TO MEASURE COMPETITIVENESS?



Analytical Role

- Measures of how well ultimate policy objectives are achieved
- Transmission processes from root causes to prosperity; fast moving symptoms of competitiveness
- The root causes of prosperity; slow moving underlying drivers of sustained prosperity
- Nature and other legacy factors that influence how fundamentals translate into prosperity

Sample Indicators

- Gross Domestic Product per capita
- Productivity
- Social Progress
- Trade
- Foreign Direct Investment
- Skills
- Infrastructure
- Market openness
- Etc.
- Size, location
- Endowments
- Heritage and demographics

In this Report, we focus on aggregated data for the entire Region, using national and where appropriate also sub-national data. The main reason is our desire to profile overall patterns of competitiveness in this part of the world, and to provide policy makers with a focus on the entire macro-region factual support for the decisions they face.

Both firms and policy makers need, however, to be aware of the significant heterogeneity across the Region. These differences are the most pronounced between the north-western parts (Nordics/Germany) on the one hand and the south-eastern parts (Baltic States/Poland/Russia) on the other. But even within these groups differences are significant, in particular with regard to the detailed profile of economic activity and competitiveness fundamentals. And as we show in final section C of this year's Report there are also significant differences across sub-national regions within countries in all parts of the Region.

PROSPERITY OUTCOMES ACROSS THE BALTIC SEA REGION IN 2017

Average prosperity, measured by GDP per capita (adjusted for purchasing power), across the Baltic Sea Region (BSR) continues to be high in international comparison. Growth is at a robust pace much in line with peer countries and regions. The BSR, which before the crisis was growing at a rate faster than both NAFTA and EU-28, had by 2012 surpassed its pre-crisis prosperity level and has since reached a higher average prosperity level than the EU-28 but remains somewhat below that of the NAFTA.

Last year's Report pointed out a number of risk factors to further prosperity growth, especially related to political risks. At least in the short-term these risks have not materialized, and prosperity outcomes have developed more positively than expected. Political risks have proven less growth-reducing while strong domestic consumer sentiment and lenient monetary policy have pushed growth upwards. In the short-term these positive trends are likely to persist. But the political risks remain present, especially with regards to the global trading system. And they will eventually be combined with weakening cyclical dynamics.

The Baltic Sea Region experienced a strong post-crisis recovery and has since settled on a growth path at virtually the same rate of +1.25% annual between 2013 and 2017 as the NAFTA economies. Recovery in the EU as a whole (EU-28) was initially hampered by the southern European debt crisis but has since 2013 had a compound annual growth rate (CAGR) at a level (+1.56% p.a.).

For Europe, and for the Baltic Sea Region in particular, the current growth rate is significantly lower than in the pre-crisis era. Catch-up to the NAFTA economies has come to a virtual standstill. While the cyclical challenges associated with the global financial crisis and the subsequent European sovereign debt crisis have been overcome, the BSR is facing what seems to be a structural slow-down in prosperity growth. This is a slow-down evident also in the rest of Europe and in fact many other advanced and emerging economies, suggesting that the underlying drivers are more general rather than region-specific.

A closer look at the data shows that a significant part of the high prosperity increases in the pre-crisis era was the result of an impressive catch-up by the relatively poorer parts of the Baltic Sea Region. The south-eastern parts of the Region (BSR Southeast), which account for about 15% of the Region's total GDP, had a compound annual growth rate of GDP per capita at a whopping 6.4% per annum in the 2000-2007 period. This compares to 2.1% in the north-western part of the BSR (BSR Northwest), resulting in an average of 3.5% per annum in the Baltic Sea Region as a whole.

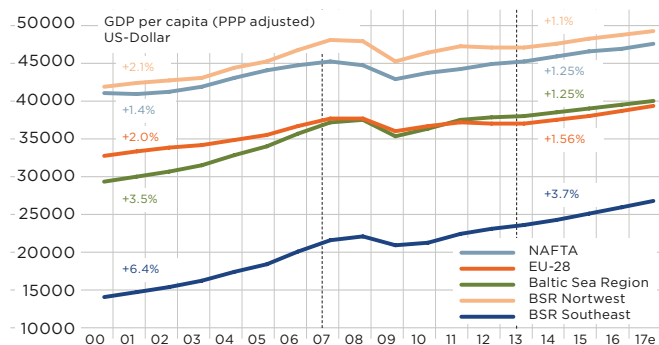
Noteworthy is that the richer parts of the Region (BSR Northwest), despite a somewhat slower post-crisis growth than NAFTA and the EU as a whole, in the long run (2000-2017) increased its prosperity lead by some 800 USD/capita compared to both groupings. The comparable figures for the BSR as a whole are yet more impressive, having gained about 4,000 USD per capita on both NAFTA and EU-28 over this period. These figures were significantly affected by the catch-up of the poorer countries in the Region (BSR Southeast) that reduced their prosperity gap to the other groupings by some 6,200 USD (NAFTA/EU-28) over the 2000-2017 period. At the same time, the per capita prosperity gap between the two parts of the Region dropped by 5,400 USD.

Catch-up within Europe and the Baltic Sea Region has thus continued. But it has lost significantly in speed. This is specifically dramatic for the Baltic Sea Region, where catch-up had been exceptional. Between 1996 and 2017, the ratio in prosperity levels between the richest and poorest country in the Baltic Sea Region as a whole dropped from 4.9 to 2.1, making for an annual reduction of .13; in the pre-crisis period (up to and including 2007) however, the annual reduction in prosperity dispersion stood at .2 (20% p.a.) only in order to fall back to .06 (6% p.a.) in the post-crisis years (2013-2017).²

Also in the EU as a whole there was a steady albeit slowing trend towards decreasing prosperity dispersion (9% p.a., 1996-2017; 7% p.a., 2013-2017). Among the long-standing EU-members (EU-14), however, the overall trend (1996-2017) was for an annual average increase in prosperity dispersion (1% p.a.) which came to a halt in the post-crisis years.

FIGURE 11

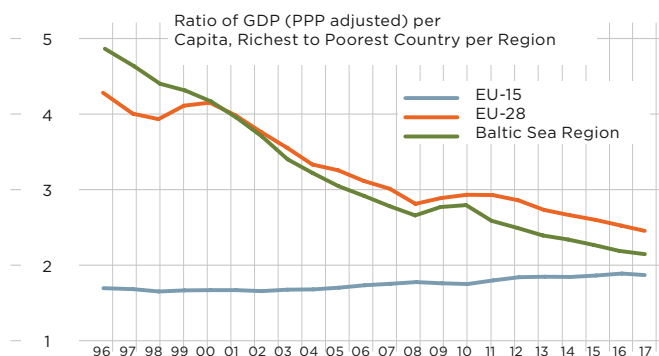
PRE- AND POST-CRISIS PROSPERITY TRAJECTORIES



Source: Conference Board (2017), author's calculations

FIGURE 12

PROSPERITY DISPERSION WITHIN CROSS-NATIONAL REGIONS 1996 - 2017



Note: Norway and Russia levels adjusted for natural resource sector; Luxembourg excluded, Ireland adjusted to GNP per capita
Source: Conference Board (2017), author's calculations

² A .2 drop in this ratio implies that the gap is reduced by 20 per cent of the prosperity level of the poorest country.

TABLE 3

PROSPERITY DYNAMICS OVER THE LAST DECADE BALTIC SEA REGION COUNTRIES

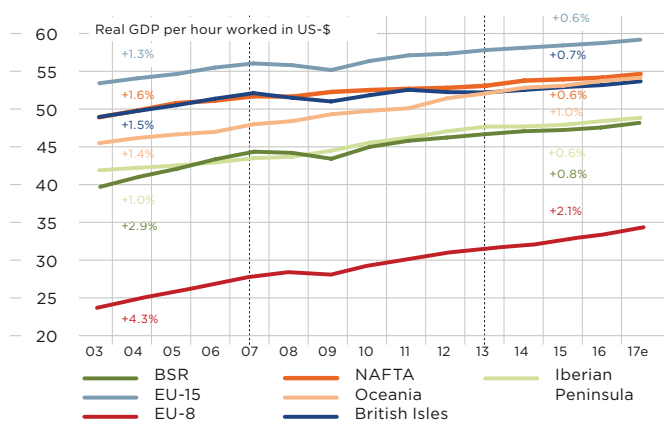
	years with GDP pc losses	Cumulative GDP pc lost in those years	Low point year	Pre-Crisis GDP pc reached	GDP pc 2017 vs low point or 2009
Denmark	4	-6.4%	2009	2017	107.52%
Finland	4	-13.0%	2009		103.65%
Germany	2	-5.4%	2009	2011	114.92%
Iceland	3	-8.8%	2010	2013	121.83%
Norway	4	-5.0%	2011		104.64%
Sweden	3	-8.3%	2009	2011	116.82%
Estonia	2	-17.2%	2009	2012	130.15%
Latvia	3	-13.8%	2010	2014	137.92%
Lithuania	1	-13.8%	2009	2012	145.99%
Poland	0		-	-	129.71%
Russia	3	-13.0%	2009	2010	113.53%

Source: Conference Board (2017), author's calculations

The development of individual countries in the BSR over the last decade can be captured by three factors: the extent of the crisis, the pace of recovery, and the overall growth rate since the crisis. Poland stands out as the only country that has not experienced any reduction in GDP per capita over the last decade. Its overall prosperity level now is 30% higher than in 2009. The Baltic countries, Finland, and Russia had the most severe downturns during the last decade, seeing cumulative GDP per capita losses of between 13 and 17% at the most. The Baltic countries recovered relatively quickly, with Latvia somewhat behind the others. Finland had a very slow recovery, dropping into recession during 2012/2013. And Russia left the global crisis quickly but was then faced with a politically driven downturn in 2015/2016. Norway and Denmark reported moderate losses during their crises, but also only very meagre prosperity growth rates in their recoveries. Iceland was hit hard initially, but has then grown robustly to achieve a GDP per capita level that is now 20% higher than during the crisis. Germany and Sweden are now at 15% of their crisis level prosperity, with Sweden recovering more dynamically after an initially deeper downturn.

FIGURE 13

LABOUR PRODUCTIVITY OVER TIME. SELECTED REGIONS



Source: Groningen Growth and Development Centre and The Conference Board (2017), authors' calculations

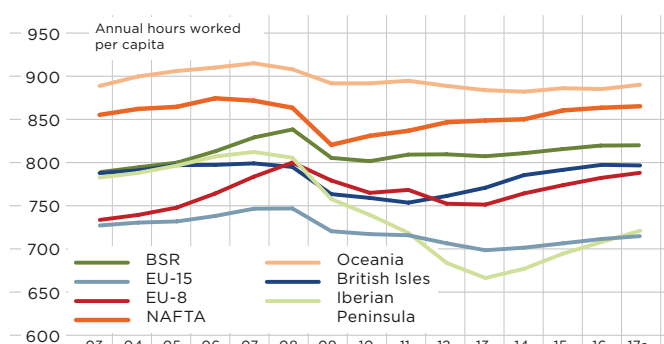
PROSPERITY GROWTH DECOMPOSITION

What factors is it then that drive the changes in prosperity growth rates? Productivity is indeed often pointed to as the "ultimate engine of growth" in the global economy; a decomposition of prosperity outcomes into its two constituent components – *labour productivity* and *labour mobilisation* – should thus provide a closer perspective.

Labour productivity growth has flattened since the crisis, and this is a trend that has continued in the last year. While the Baltic Sea Region registered around 2.9% annual productivity growth in the 2003-2007 period, this measure has dropped to below one per cent in the most recent five-year period. Even though the number of BSR-countries expected to report slowing labour productivity growth (year-by-year) has dropped from six in 2016 to three in 2017 there are few signs of a change in the overall trend of lower productivity growth rates. Whereas Finland in 2017 is expected to report an absolute decline in labour productivity Denmark and Norway continue to report < 1% growth; an additional three countries (Sweden, Germany & Iceland) will report growth below 1.2%.

FIGURE 14

LABOUR MOBILIZATION OVER TIME. SELECTED REGIONS



Source: Groningen Growth and Development Centre and The Conference Board (2017), authors' calculations

Data on other world regions shows that the slow-down in productivity is a global concern, not a particular trend only affecting the BSR. Only Oceania and Eastern and Central Europe (EU-8) are reporting average growth in excess of 1% in the 2013-2017 period. The factors explaining this widespread slowdown in productivity remain under discussion. One important observation that has come to the forefront is an increasing heterogeneity not only across countries but also across firms. While globally leading firms continue to innovate and increase productivity at a high rate, it seems that an increasingly large share of other firms do not keep pace. The challenge is not so much innovation at the global productivity frontier but rather the diffusion of these technologies.³ The OECD point to the importance of a global interconnectedness of firms through for example trade and FDI but also to the importance of policies to enable the mobility of production factors from low productivity sectors/firms to high productivity such. Also, organisational factors such as new business models and daring to deploy new technologies into the organisations constitute important diffusion mechanisms. Finally,

³ Find more research and policy insights on this from the OECD at <http://www.oecd.org/eco/the-future-of-productivity.htm>, also covering some of the larger Baltic Sea Region countries.

a key transmission mechanism of course remains investment, especially investment in so-called knowledge-based capital. And here the data does show low post-crisis growth despite the low financing costs. Another aspect is the shift of economies towards lower value-added service sectors.

The other component driving improvements in prosperity is labour mobilisation, here defined as the number of hours worked per capita. The measure captures demographic changes (e.g. a growing or ageing population) and unemployment but also aspects of how the country in question has designed social benefits (e.g. more or less paternal/maternal leave). Again, we could in the pre-crisis period see equal or faster growth in the Baltic Sea Region than in other regions in Europe and the world. During the crisis years the gains made in the preceding half a decade were wiped out and labour mobilisation has as of yet, to reach the pre-crisis level when looking at the Baltic Sea Region as a whole. For 2017, the Region is projected to report essentially flat hour per capita and at a level below many of the other advanced macro-regions.

Following the sharp adjustment during the crisis, labour mobilization has recovered only gradually, and the Region remains below its pre-crisis level of labour mobilisation. For 2017, the BSR is projected to report essentially flat hours per capita (+0.6%), below most other advanced macro-regions we are tracking. Compared to the other European regions this is a disappointing development, particularly given the robust overall growth data in the economies.

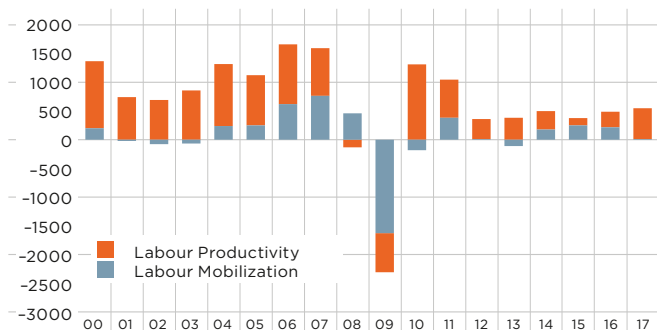
While labour mobilisation is 'bounded above', i.e. there is an upper level beyond which it cannot grow (and as an economy is approaching this level, further growth is likely to get harder), labour productivity is not limited in this way. This gives labour productivity a critical role for long-term growth. In the short term, however, labour mobilisation has proven to be faster to change. And, it is important not only at the aggregate level as a contributor to overall prosperity but also at an individual level where work is an important contributor to inclusion in society even at low levels of pay and productivity; the latter particularly important in an era of heightened international migration. The simultaneous slow-downs of both productivity and of mobilization are thus issues that policy makers across the Region should take seriously.

When decomposing the impact of changes in labour productivity and labour mobilization on overall prosperity growth, the dominant role of productivity becomes clearly visible. The two tend to interact over the cycle, with labour productivity growth often adjusting first before companies change their level of employment. The fact that in 2017 all of the prosperity gains for the BSR are projected to come from productivity improvement thus should be a positive signal (see Figure 15). However, it could also suggest that the Region might be facing bottlenecks in terms of labour market matching and skill supply, at least in some segments of the labour market.

When comparing the dynamics across the BSR with the EU-28 and the NAFTA countries a few observations stick out: First, growth in the Baltic Sea Region significantly exceeded that of the other two groupings in the pre-crisis era. Second, growth in the BSR has been more 'balanced' in that both the mobilisation factor (grey) and the productivity factor (orange) have for the most part been net contributors to prosperity. By contrast, in NAFTA there are a number of years prior and during the crisis where the mobilisation

FIGURE 15

DECOMPOSING BSR PROSPERITY GROWTH. ANNUAL CHANGE IN GDP PER CAPITA



Source: Groningen Growth and Development Centre and The Conference Board (2017), authors' calculations

FIGURE 16

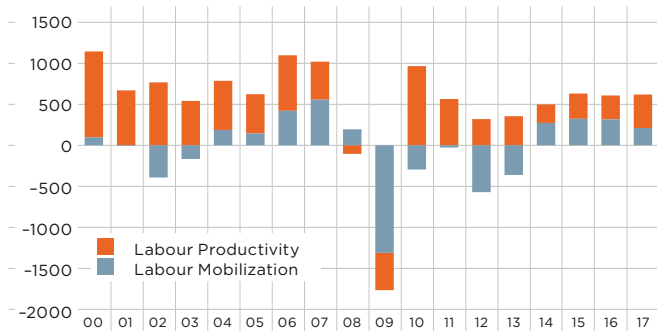
DECOMPOSING NAFTA PROSPERITY GROWTH. ANNUAL CHANGE IN GDP PER CAPITA



Source: Groningen Growth and Development Centre and The Conference Board (2017), authors' calculations

FIGURE 17

DECOMPOSING EU-28 PROSPERITY GROWTH. ANNUAL CHANGE IN GDP PER CAPITA



Source: Groningen Growth and Development Centre and The Conference Board (2017), authors' calculations

was a net deflector from growth. And third, mobilisation has historically proven to be pro-cyclical, i.e. during economic upswings labour mobilisation plays a more important positive role and vice versa. Finally, in the post-crisis years, BSR prosperity growth has predominantly and increasingly had to rely on productivity gains. The latter is an important insight with regard to the future prosperity of the Region.

FIGURE 18

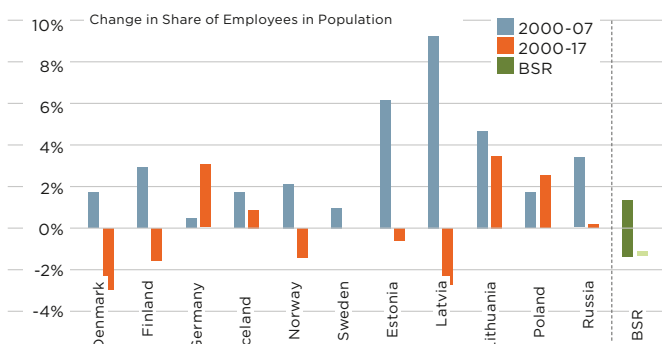
PROSPERITY DECOMPOSITION.BALTIC SEA REGION COUNTRIES AND
GLOBAL REGIONS IN 2017

GDP per Capita (PPP)	=	• Demographics • Labor Market	X	• Labor Relations	X	• Skill, Capital • TFP
		Mobilization- Factor		Intensity- Factor		Productivity- Factor
Norway		Iceland		Poland		Norway
Sweden		Germany		Russia		Denmark
Germany		Denmark		Latvia		Germany
Denmark		Sweden		Lithuania		Sweden
Iceland		Estonia		Iceland		EU-15
NAFTA		Baltic Sea Region		NAFTA		Finland
Finland		Lithuania		Estonia		NAFTA
EU-15		Russia		EU-11		EU-28
Baltic Sea Region		NAFTA		Baltic Sea Region		Baltic Sea Region
EU-28		Finland		Finland		Iceland
Estonia		EU-15		EU-28		Lithuania
Lithuania		Latvia		Sweden		EU-11
Poland		EU-28		EU-15		Estonia
Russia		EU-11		Denmark		Poland
EU-11		Norway		Germany		Latvia
Latvia		Poland		Norway		Russia

Note: Working hours for some countries are estimated;
for Norway only Mainland Economy

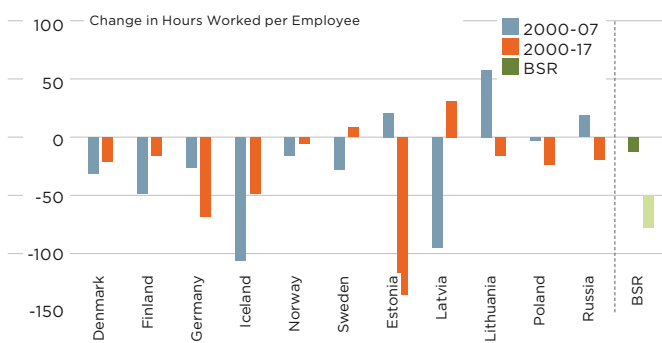
Source: Groningen Growth and Development Centre
and The Conference Board (2017); authors' calculations

FIGURE 19

**LABOR MOBILIZATION TRENDS ACROSS BSR COUNTRIES
PRE- AND POST-CRISIS PERIODS**

Source: Groningen Growth and Development Centre and
The Conference Board (2017); authors' calculation

FIGURE 20

**LABOUR INTENSITY TRENDS ACROSS BSR COUNTRIES
PRE- AND POST-CRISIS PERIODS**

Source: Groningen Growth and Development Centre and
The Conference Board (2017); authors' calculation

**PROSPERITY GROWTH DECOMPOSITION:
COUNTRY-LEVEL ANALYSIS**

The Baltic Sea Region has achieved its strong overall performance through a quite balanced performance across labour mobilisation, which can be further differentiated into labour mobilization and intensity, and productivity. The BSR differs from the EU-28 in particular with regard to the mobilisation factor; it has developed labour market and social institutions that have opened ways into employment for a much larger share of the population. The EU-15, a homogenous group of prosperous countries, achieves a prosperity level that is slightly higher than in the BSR as a result of higher productivity, while lagging on both aspects of labour mobilisation.

The Baltic Sea Region is a heterogeneous region both in terms of outcomes and with regards to which elements of prosperity creation that are the most pronounced. There are marked disparities between countries and groups of countries in the BSR when it comes to the extent of prosperity created. The overall ranking in the schematic provided has also remained intact when comparing 2016 with 2017. This means that Norway remains the most prosperous country when it comes to GDP/capita and that the Nordic countries are on a level above NAFTA (with the exception of Finland), EU-15, BSR as well as the EU-28. Notable is also the fact that three out of the four countries (Latvia being the exception) making up the south-eastern part of the BSR ranks higher than the average for so-called accession countries (EU-11).

Labour mobilisation and productivity, too, differ significantly across the Baltic Sea Region (see Figures 19 & 20). To understand the patterns in these differences it is useful to further differentiate labour mobilisation by the effect of labour markets and demographics captured by the share of employees in the population (below, the mobilisation factor) and the effect of labour relations captured by the number of hours worked per employee (below, the intensity factor). More prosperous countries and regions have tended to achieve high levels of productivity as well as engaging a large share of their population in the labour market, while they exert fewer hours of work per employee.

Looking at mobilisation (i.e. employees per capita) in individual countries Iceland, Norway, Germany, Denmark and Sweden have for years been in the lead in this respect, so also in 2017. Noteworthy is how Estonia steadily has increased labour mobilisation and that it in 2017 ranks above the BSR-average. Turning to intensity (i.e. hours worked per employee) we immediately note that as Estonia in 2017 moved up in mobilisation it moved down when it comes to labour intensity. The trade-off between the two labour related factors can also be exemplified by Poland being the laggard in one and the lead in the other; likewise, Germany, Denmark and Sweden all display a reversed ranking in labour intensity as compared to labour mobilisation.

On both of these factors the 2007 crisis had some impact; both labour mobilization and intensity developed less dynamically than before. Especially on labour mobilization all countries with the exception of Germany and Poland saw performance deteriorate or improve less dynamically. On labour intensity, the Baltic countries show significant fluctuation but otherwise there seems to be a relative stable trend of falling hours per employee.

Productivity, finally, is the third factor that helps define what level of prosperity can be achieved. The complementarity of these factors is, for example, testified to by how Norway makes up for its low rank in labour intensity with a top-rank in productivity, leaving the country in the top-spot with regards to prosperity. The situation is similar in the other Nordic countries and Germany in that they make up for what they lack in labour intensity by solid performance in productivity.

Poland, Latvia and Lithuania are in 2017 all expected to increase labour productivity on an annual basis near or in excess of 2.5%. Also, Estonia continues to post acceptable growth (e. 1.8%) and Russia has turned its 2016 absolute decline into growth (e. 2.1%) in 2017. For the north-eastern countries prospects for 2017 are more bleak. Whereas Germany, Iceland and Sweden look at growth only slightly above one percentage point (+1.1-1.2%) Finland is looking to a decrease in labour productivity of the same magnitude (-0.9%). Denmark and Norway place themselves in-between with very modest growth of 0.5% and 0.8%, respectively.

The productivity catch-up in the BSR was very pronounced in the pre-crisis period with Latvia, Russia, Estonia and Lithuania all experiencing annual average growth in 2003-2007 at or above 6% per annum. It still seems to have some bearing on the post-crisis period for parts of the Region. Poland is interesting in that its development is slightly at odds with the general pattern of catching-up; it had by comparison a modest growth of labour productivity in the pre-crisis period but did on the other hand continue to grow labour productivity by nearly 2% annually in 2013-2017. Poland's performance in the latter period is surpassed only by Latvia, which continued its strong record with growth of 2.7% annually.

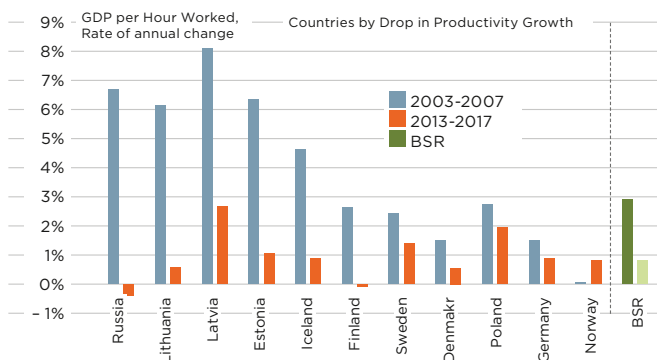
PROSPERITY BEYOND GDP: SOCIAL PROGRESS INDEX

While GDP remains an important indicator of prosperity, there has been a very active discussion on how to better measure both the GDP and beyond-GDP related aspects of prosperity. One measure that has existed for some time and which also allows for comparisons across the Region is the Social Progress Index (SPI); an annual assessment of countries' performance on a range of outcomes beyond GDP. The index is one example of the new range of tools that aims to enhance our understanding of the standard of living. It provides an overall score, a breakdown along key pillars and individual components of social progress, and identifies countries' relative strengths and weaknesses compared to their most relevant peers.⁴ The index distinguishes between three separate pillars: basic human needs like shelter, safety, and basic medical care; foundations of wellbeing like environmental quality and access to information and education; and opportunities related to personal rights, advanced skills, and tolerance.

The Baltic Sea Region continues to perform very high on the Social Progress Index. In fact, the 2017 overall SPI is spearheaded by Denmark, Finland, Iceland and Norway (on places 1-4); Sweden follows on 8, Germany on 13 and Estonia on 23. Looking at the three pillars of the index we see that the Region performs the best when it comes to catering to the 'basic human needs' of its population; in this respect only Latvia (rank 34), Lithuania (rank 40) and Russia (rank 65) score below 90. With regards to the 'foundations of wellbeing' the scores are somewhat lower but the BSR population weighted average is a respectable 84.22 which would have placed the Region in rank

FIGURE 21

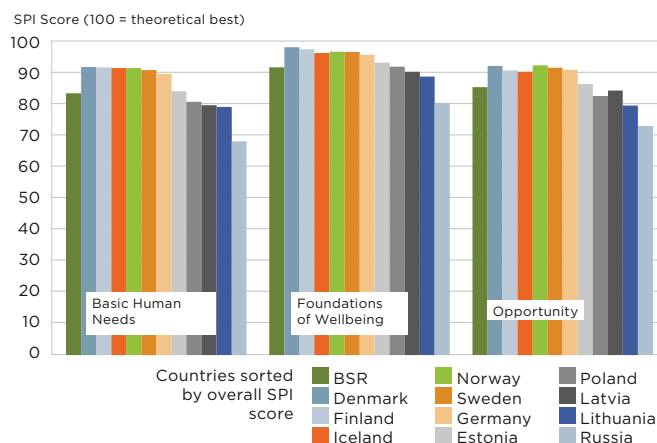
LABOUR PRODUCTIVITY GROWTH ACROSS BSR COUNTRIES PRE- AND POST-CRISIS PERIODS



Source: Groningen Growth and Development Centre and The Conference Board (2017); authors' calculation

FIGURE 22

SOCIAL PROGRESS INDEX BALTIC SEA REGION COUNTRIES, 2017



Note: BSR scores are calculated as population-weighted sum of regional scores
Source: Social Progress Index (2017)

31 had it been a country; just ahead of the United States which scores 84.19. The third pillar ('opportunity') is the area where the results in are most diverse, and therefore also the average for the Region as such is the lowest. However, given that this is an area where the world in general has found it most difficult to deliver to its citizens, the average score of BSR (72.36) would (had it been a country) still have rendered it a ranking of 25, just ahead of the Czech Republic (72.15).

Even though the SPI is relatively stable over time and the overall picture of the BSR did not alter radically between 2016 and 2017 there are still some noteworthy changes. In the opportunity factor Latvia (+2.0) and Russia (+1.2) noted a significant (≥ 1 point) improvement, while Poland slipped significantly (-1.9). In a slightly longer perspective (2014-2017) significant (≥ 1 point) improvements are found across all three factors in Latvia, Lithuania and Russia and for two factors in Estonia. The highest recorded improvement in the Region was for Norway; the country gained 3.2 points in 2014-2017 in the opportunity factor. This is a factor that has been lagging globally but where significant improvements were made in seven of the 11 countries in the Region.

⁴ Find more background at www.socialprogressimperative.org.

FIGURE 23

FOREIGN TRADE INTENSITY 1995–2016 SELECTED REGIONS

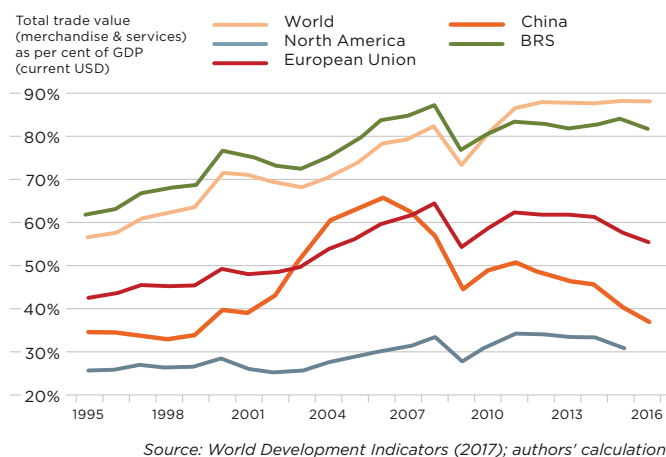


FIGURE 24

CHANGING WORLD TRADE PATTERNS 1992–2016. SELECTED REGIONS

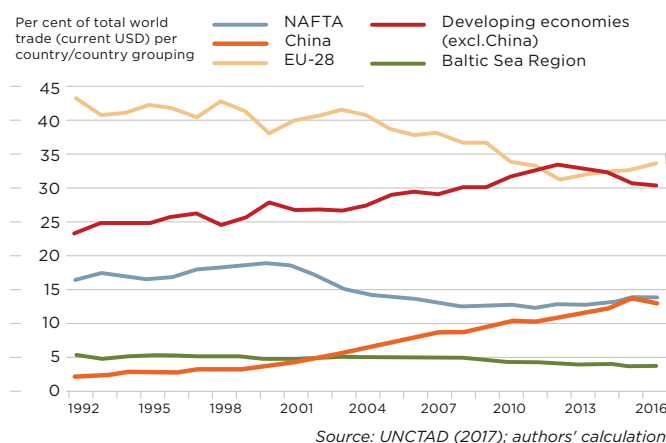
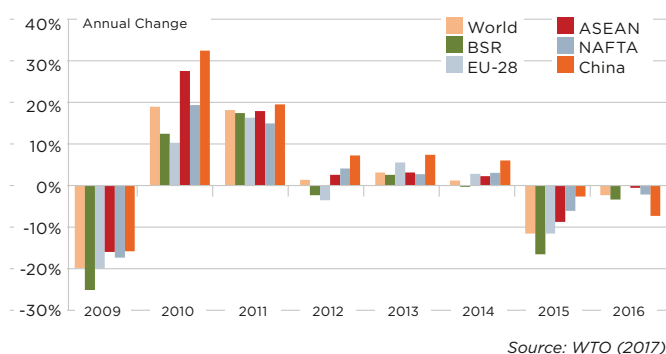


FIGURE 25

TRADE DYNAMICS. ANNUAL GROWTH OF EXPORT VALUE



ECONOMIC ACTIVITY IN THE BSR: TRADE AND INVESTMENT

Trade and investments are two important transmission mechanisms for transforming fundamentals into economic outcomes, especially in a macro-region dominated by small and very open economies. For long the Baltic Sea Region has been one of the regions in the world with the highest share of exports and imports in GDP. The dramatic growth of world trade in the period prior to the global crisis has naturally created significant opportunities for the Region.

However, the environment for and attitudes towards global trade and investment show signs of a fundamental change in the post-crisis era. With growing scepticism towards the benefits of free and global trade it is important to remember that openness to trade together with technological progress remain the two most important drivers of prosperity.

EXPORTS

Global trade had in the years prior to the global crisis grown at a very high rate. In the ten years preceding the crisis (1999–2008) the value of world trade was up by a total of 169% (+189% in the BSR) without a single year of decline. One key factor was the increasing growth of China but also other emerging economies in the global economy. Jointly they have increased their share of world trade from 26 to 43.5% between 1992 and 2016. At the same time as the EU-28 countries have seen a decline in their share of world trade from 43% to 34%. Their market share gains reflected the development of global supply chains with them as key destinations along the way; most of the growth in traded was in parts and within-firm supply chains. It was also driven by the growing hunger for natural resources needed to support growing total production and rising prosperity levels in the countries that had joined the global economy.

In the aftermath of the crisis (2010–2016) total growth in the world was a mere 0.6%, with nominal declines in three of the seven years of 'recovery' (2012, -3.3%; 2015, -13.5%; 2016, -2.2%). The BSR was one of the regions whose exports took among the worst hits in the 2009 crisis (-25%) and it trailed the world as well as competing regions in the recovery interim (2010–2014) only to again be hit worse than any other region in the 2015 downturn when exports again shrunk by 17 per cent. In 2016, too, the contraction in the BSR was steeper than in the world in general (-3.5% or -3.8%), about half of the contraction seen in the still slowing Chinese economy. Norway and Russia took the worst hit with reductions of 14.4% and 17.5%, respectively (this year only partly attributable to oil prices);⁵ drops were nevertheless present in all countries in the Region except for three, Estonia (+2.6%), Poland (+1.7%) and Germany (+1%).

As a result, the BSR has continued to lose global market share. Partly this is a result of how the economic epicentres of the world have moved over the last quarter of a century. However, these long-term global changes do little to explain the fact that the EU-28 in the post-crisis years overtook the BSR when it came to foreign trade intensity.

⁵ The oil price decrease came to a partial halt during the second half of 2016; the monthly average price (Europe Brent Spot, USD/barrel) was down 17% in 2016 as compared to 2015 – to compare with the decrease of 47% for 2015.

The relative decline in market share over time with an overall decline from 5.4% to 3.8% (-30%) of world trade between 1992 and 2016 was largely driven by the north-western countries of the Baltic Sea Region (-39%). It was partially offset by the increasing trade in the south-eastern part of the Region (+166%). The three Baltic States and Poland that have seen market share gains in both the long- (1996-2016), medium- (2006-2016) and short term (2015-2016). In the very short term (2015-2016) we could see some gains also for Sweden, Denmark and Germany. However, in the post-crisis era (2012-2016) declines have affected all parts of the Baltic Sea Region and the total decline from 4.2% to 3.8% of world trade (-9.5%) is in stark contrast to the recovery of the EU-28, increasing its share of world trade from 31.4% (2012) to 33.7% (2016), i.e. an increase of 7.2%.

Looking at total exports in the 2006-2016 period reveals that the value of exports from the BSR remained fairly flat. Total export value (current prices) from the Region in 2016 stood at only 3.8% above that in 2006; and if only looking at the north-western part of the Region the increase in value was a mere 1%; compensated for by an increase from the south-eastern part of 6.2%.

FOREIGN DIRECT INVESTMENTS

Many large firms in particular have shifted from an export-focused internationalisation strategy to one that also relies on foreign direct investment (FDI). For long prevailed a situation where the richer parts of the world were both the origin and target for the majority of the flows of FDI. However, over the last two decades this picture has markedly changed: there has been a downward trend with regards to this dominance of advanced economies. The combined share of inflows for EU-28 & NAFTA dropped from 79% in year 2000 to 39% in 2014; a similar trend occurred with outflows that dropped from a peak of 89% (1999) to 45% by 2014. A revival of these two blocks has however taken place in the preceding year, something that reflects also on the developments in the BSR.

The BSR has traditionally been an important part of the global FDI landscape. In terms of FDI stocks, it has since 2000 accounted for between 4% and 5% of both the inward and outward global FDI stock, much higher than the Region's share of global GDP or trade. The market shares in terms of in- and outflows were particularly high in the years before 2000, ranging between 6% and 9%. Since then, however, the dynamics have been significantly lower. Initially flows were in line with the position the Region had on FDI stocks, i.e. around 5%. But especially after the global crisis the Region has lost relative position. This is particularly visible when looking at moving averages that smooth out the high year-to-year volatility of flows driven by large individual deals. There has been no year with market share gains since 2007 on this measure, neither for inflows nor outflows.

The Region has always been a net exporter of capital; this is appropriate for a Region that is highly advanced and can through FDI leverage its knowledge in foreign markets. But this gap has been growing over time, which might signal a decreasing attractiveness of the Region for foreign firms. With local markets of relatively modest size this points towards an at least relatively shrinking value of the Region as a place to serve other parts of the world economy with ideas, products, or services. A closer look

FIGURE 26

WORLD EXPORT MARKET SHARES BAL TIC SEA REGION, 2005-2016

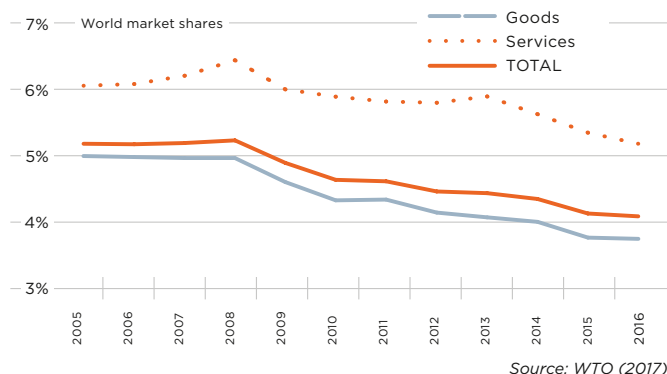


FIGURE 27

CHANGING WORLD MARKET SHARES OF TOTAL TRADE BAL TIC SEA REGION COUNTRIES, 1996-2016

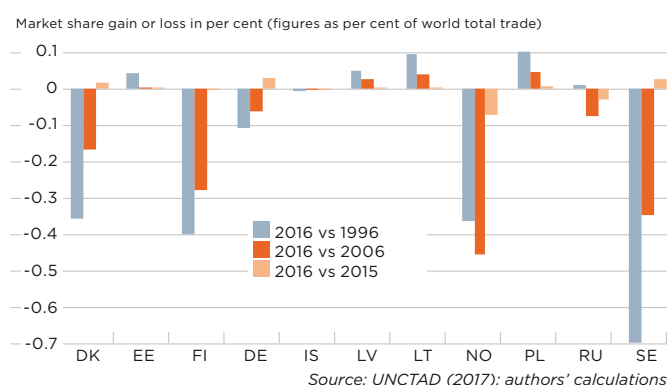


FIGURE 28

TOTAL EXPORT VALUE OVER TIME. BAL TIC SEA REGION COUNTRIES

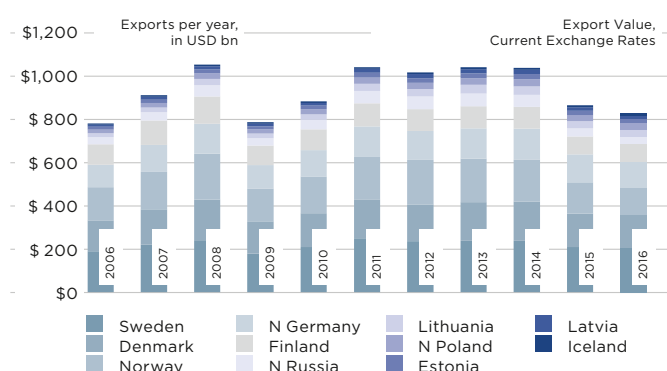
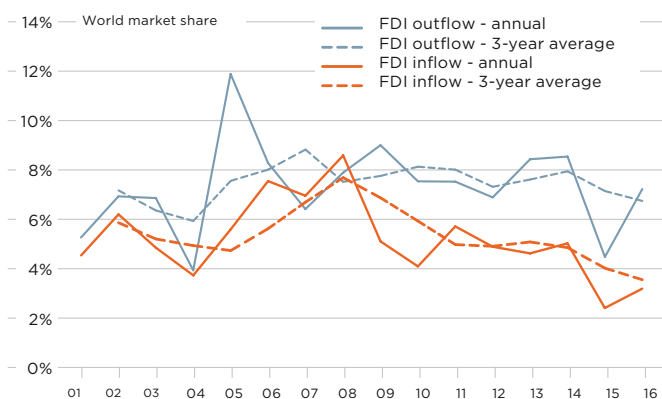


FIGURE 29

BALTIC SEA REGION FDI FLOWS

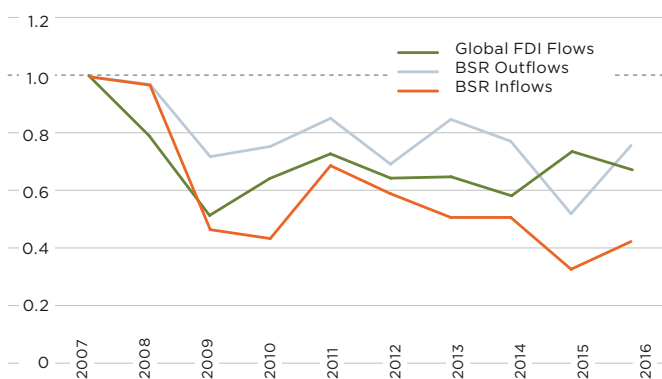


Source: UNCTAD (2017), author's analysis.

FIGURE 30

GLOBAL FDI FLOWS OVER TIME

CURRENT PRICES AND EXCHANGE RATES, 2007 = 1



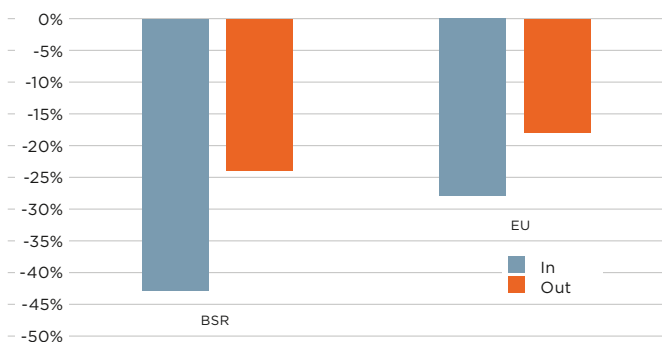
Source: UNCTAD (2017), author's analysis.

FIGURE 31

FDI STOCKS SINCE THE CRISIS

CHANGES IN WORLD MARKET SHARE, 2007-2016

Relative change in world market share



Source: UNCTAD (2017), author's analysis.

at the at the FDI activity level in the Region and globally shows that his change in market share is also reflected in lower absolute activity. Starting with the most recent peak in FDI activity in 2007 there was a collapse of FDI activity during the crisis followed by a gradual recovery.

A comparison of the BSR with the EU-28 indicates that the Region has suffered in a more pronounced way from the slowdown in FDI activity. The market share of inward FDI stocks dropped by 40% over the last decade; for the EU overall it was a drop by less than 30%. Changes in the outward stock market share have been smaller and more similar across these two regions. The difference, then, is not so much the FDI activity of companies from the BSR and the broader EU but the attractiveness as a location for foreign investors. This could be driven by consolidation of activities in some industries leading to a preference for countries with larger home markets, or by changes in the relative quality of underlying competitiveness factors across locations.

All countries in the BSR have lost market share as hosts of foreign direct investment. Unsurprisingly Iceland was hit the hardest; here the 2006 figures were grossly inflated by a financial sector in overdrive. But other countries, especially most Nordics, Germany, and Russia, lost significant position. The Baltics, Poland, and to some degree also Sweden were less affected. Poland stands out as entering as a significant outward investor. Latvia and Lithuania also gained market share in this respect, reflecting the growing integration across the Baltic countries.

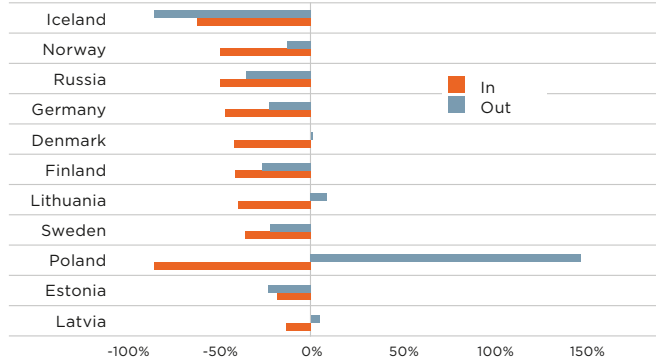
The data on trade and foreign direct investment signals the challenges facing the Baltic Sea Region in a changing global economy. Economic activity is shifting elsewhere, especially to Asia, drawing companies and opportunities with it. Getting investment into the Region is becoming structurally harder. Firms internationalize in new ways, often shifting investments to large markets rather than serving them through exports. This is beneficial not only for these firms but ultimately also for the locations they come from. But it changes the footprint of economic activities and benefits at home, often creating a smaller but much more productive base within the domestic economy.

FIGURE 32

FDI STOCKS SINCE THE CRISIS

CHANGES IN WORLD MARKET SHARE, 2007-2016

Relative change in world market share



Source: UNCTAD (2017), author's analysis.

FOUNDATIONS OF COMPETITIVENESS: THE POSITION OF THE BSR

Fundamental competitiveness – ranging from aspects related to the quality of the business environment, to cluster presence and firm sophistication – captures the “root causes” of prosperity. These fundamental factors, often interacting in systemic ways, determine the level of prosperity that a location can sustain.

Competitiveness rankings that aggregate these factors in often simplistic and somewhat arbitrary ways can still provide two types of valuable insights: (i) they can capture the relative quality of one location versus other locations as a place to do business; and, (ii) they can help us understand whether and how the balance between prosperity and wages on the one hand and competitiveness fundamentals on the other hand has shifted. The latter could potentially signal imbalances that could either threaten the sustainability of prosperity or signal growth opportunities in which case they would warrant policy- and/or business responses.

Apart from the overall rankings we focus in our analysis on two aspects that are particularly relevant for the BSR. First, the cost of doing business as a result of government rules and regulations matters strongly in economies that have a large government sector. This is particularly the case for the Nordic countries and Germany. Second, innovative capacity and the ability to translate research into innovative economic activity are particularly critical for countries that compete on innovation and knowledge.

AGGREGATE MEASURES OF FOUNDATIONAL COMPETITIVENESS

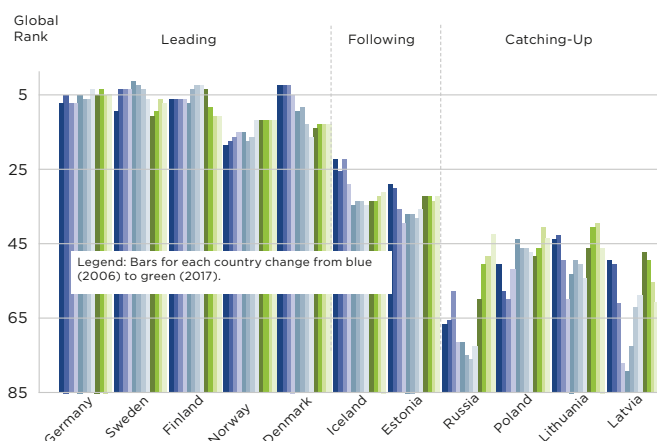
The Global Competitiveness Report, published by the World Economic Forum, ranks countries annually on their overall competitiveness. Baltic Sea Region countries continue to rank high in their 2017 assessment. Germany has for some time held the top spot in the BSR and continues to do so also this year as the fifth (5th) most competitive economy in the world, unchanged from last year. In 2017 Sweden slips one place to seventh (7th) place in the overall ranking but remains the second ranking country in the Baltic Sea Region. Finland is the third top-10 BSR-country by virtue of defending its 10th ranking also this year and it is closely followed by Norway and Denmark which also remain on its rankings from the previous year (11 & 12, respectively). In the group of “following” countries Iceland, which in 2016 climbed upwards and surpassed Estonia, drops one notch while Estonia climbs one notch, putting them next to each other in the overall ranking at places 28 and 29, respectively.

In the group of countries classified as “catching up” Russia climbs an impressive five (5) notches as compared to 2016 to a 38th rank, surpassing Poland which drops three notches to a 39th rank. Unfortunately, Lithuania did not do any catching up but rather slipped a high six notches from 35th to 41st place. Latvia, sadly, did not do much better and slipped five notches to a rank of 54 (behind Turkey), retaining its position as a laggard among the BSR-countries. Compared to 2014 Latvia has slipped 12 positions.

Overall, these rankings continue to suggest that the Region is well placed to compete successfully in the global economy; it also does not signal major issues in terms of the sustainability of current

FIGURE 33

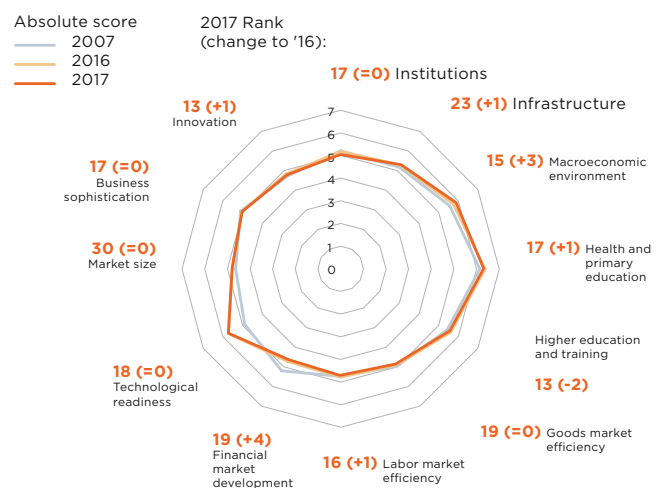
GLOBAL COMPETITIVENESS RANKINGS OVER TIME Baltic Sea Region Countries, 2006-2017



Source: World Economic Forum (2017)

FIGURE 34

GLOBAL COMPETITIVENESS RANKINGS OVER TIME BALTIC SEA REGION PROFILE, SCORE BY PILLAR



Score is GDP-weighted average of country scores;
Rank after elimination of BSR countries
Source: World Economic Forum (2016), author's calculations

levels of prosperity. At the same time, however, the significant slips by two of the countries in the Region raises some concern, for the countries themselves of course but also with regard to the cohesion of the macro-region as such.

Turning to the components of the overall index we see a weighted overall ranking of 15 or better for the Baltic Sea Region in the fields of innovation (13), higher education and training (13) and from 2017, after having gained three positions as compared to 2016, also macroeconomic stability (15). The three components nevertheless differ with regard to cohesion in the Region; whereas the national scores for innovation varies between a high of 5.7 (FI) to a low of 3.1 (LV) – making the variable the one with second highest standard deviation – the virtues of the Region are significantly more equally distributed with regard to higher education and macroeconomic stability which both have a minimum national score of 5 and maximum scores of 6.2 (FI) and 6.6 (NO), respectively.

Looking at the developments over time and comparing with the pre-crisis situation (2007) the greatest average improvement for the region (+0.9 on the 1-7 scale) is for technological readiness whereas the second highest improvement in score is for health and primary education (+0.25); the latter is also the component where the geographical variation across countries is the smallest with a standard deviation of only 0.25 and the lowest minimum score equalling 6 (RU). However, there are also areas where the scoring has decreased for the region as such, for example financial market development which is still down 0.5 points compared to the situation before the financial crisis.

Looking at individual countries, Denmark has seen its scores (2007-2017) go up the most in technological readiness (+0.45) and macroeconomic stability (+0.35) while losing significantly in financial market development (-1.02) as well as institutions (-0.68). Finland also saw improvements in technological readiness (+0.62) but a weakening in above all infrastructure (-0.45) and the macroeconomic environment (-0.38). Germany, too, gained on technological readiness (+0.8) but even more on market size (+1.9), while it over time has lowered its scores on institutions (-0.85) and financial markets (-0.55). Iceland likewise lost much with regard to financial markets (-1.36), but also on innovation (-1.0) and market size (-1.6) whereas it improved its standing technological readiness (+0.8), rendering it the same score as Germany.

Norway, which over the years has improved its overall ranking has recorded gains in every one of the 12 categories; in 5 categories gains were in excess of one full point on the 1-7 scale and the very strongest gains in 2007-2017 were with regard to technological readiness (+2.1) and institutions (+1.74). By contrast Sweden during the same time period records losses in eight categories and gains in only four; the highest gain was for macroeconomic environment (+0.68) and the biggest loss was for financial markets (-0.6).

Also in the south-eastern part of the Region significant advances were made in all countries except for Latvia with regard to technological readiness but also for infrastructure; noteworthy is that with regard to the former increases were significantly higher than for the north-eastern part of the Region with an average increase of 1.35 points as compared to 0.87 points in the north-western part. Also, in Estonia and Poland the score was increased in 10 out of the 12 categories while it was up in 9 out these categories in Russia and Lithuania. By contrast, in Latvia the score was down in all 12 categories in 2007-2017.

To sum up, while there are some common threads – in particular with regard to technological readiness being improved across the region, the data also reflects the highly location- and context-specific priorities individual countries face in improving their competitiveness.

THE COST OF DOING BUSINESS: GOVERNMENT RULES AND REGULATIONS

An important aspect of competitiveness across the Region is the cost of government rules and regulations that companies face. Also in this year's Report, we approach this issue with the help of the annual World Bank publication (and database), *Doing Business*. This index assesses the ease of doing business measured according to a number of areas and indicators of business regulation in 190 countries around the world and the results include both an overall ranking and a measurement of how the country performs relative to the global frontier.

Denmark continues to lead this ranking, being the third highest ranked country in the world (second only to New Zealand and Singapore); Norway has overtaken Sweden as the second highest ranking in the Region. Noteworthy is Sweden's drop to ninth place and that Estonia has surpassed both Germany and Finland if comparing to last year, placing the country as the 12th best in the world with regard to Ease of Doing Business. Positive is that also Latvia made significant progress and placed itself above the BSR average. The higher pace of improvements in these two countries as compared to Germany this year saw the latter drop below the BSR average; placing it at 17th place.

Overall, while the Baltic Sea Region countries rank slightly lower on this measure than on overall competitiveness as analysed above their position is overall solid and absolute improvements in the score is recorded for all countries. There are of course caveats to this (as with all) type of ranking; for example, if one excludes Russia with its 40th rank (up from 51st in 2016) the region does come out having ten economies among the world's top-24 economies when it comes to the ease of doing business.

FIGURE 35

DOING BUSINESS ACROSS THE BALTIC SEA REGION COUNTRY PERFORMANCE, 2017

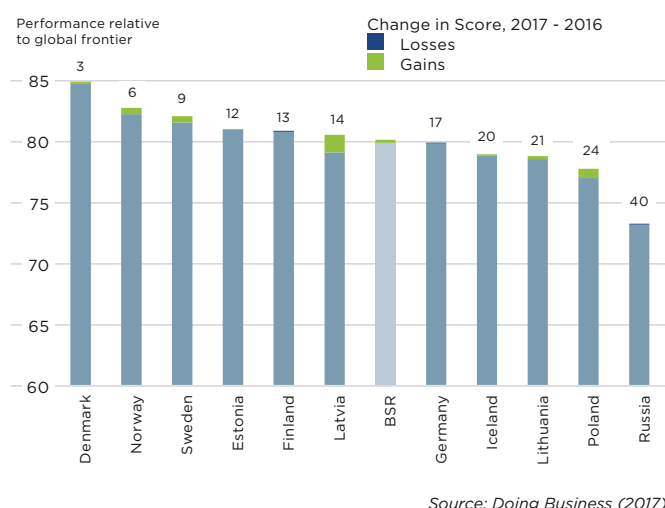


TABLE 4

RANKING OF THE BSR-COUNTRIES WITH REGARD TO THE COMPONENTS OF DOING BUSINESS, 2017

Rank (1-190) 2017	DK	NO	SE	EE	FI	LV	DE	IS	LT	PL	RU	BSR
Ease of Doing Business	3	6	9	12	13	14	17	20	21	24	40	16.3
Registering Property	12	14	10	6	20	23	79	15	2	38	9	20.7
Enforcing Contracts	24	4	22	11	30	23	17	32	6	55	12	21.5
Getting Electricity	14	12	6	38	18	42	5	9	55	46	30	25.0
Resolving Insolvency	8	6	19	42	1	44	3	14	66	27	51	25.5
Paying Taxes	7	26	28	21	13	15	48	29	27	47	45	27.8
Trading across Borders	1	22	18	17	33	25	38	66	19	1	140	34.5
Dealing w. construction permits	6	43	25	9	40	23	12	70	16	46	115	36.8
Protecting Minority Investors	19	9	19	53	70	42	53	22	51	42	53	39.4
Starting a Business	24	21	15	14	28	22	114	34	29	107	26	39.5
Getting Credit	32	75	75	32	44	7	32	62	32	20	44	41.4
Average rank (10 components)	14.7	23.2	23.7	24.3	29.7	26.6	40.1	35.3	30.3	42.9	52.5	31.2
Std. deviation (10 components)	9.3	20.4	18.2	15.2	18.1	11.7	33.5	21.6	20.1	26.2	40.5	7.5

Source: Doing Business (2017), authors calculations.

Note: Horizontally countries are ordered according to their overall rank (Ease of Doing Business); the individual components are ordered according to the un-weighted average ranking for the BSR-countries.

Turning to look at the components that make up the overall index we see that there is significant variation across the region. In the overview table ranks on the individual components that are equal or better than 10 and equal or worse than 50 are indicated in green and red, respectively. Also, in the table the individual components are sorted according to average rank across the region, i.e. registering property is the component where the Region excels whereas getting credit remains a hassle in many parts. The highest dispersion in ranking (standard deviation) within the Region are this year within cross-border trade, ease of starting a business and procedures related to the handling of constructions permits; these are also areas where the region on average score rather low. The greatest cohesion is seen with regard to contract enforcement and tax payments; had we excluded Germany from the calculations also registering property would have been one of the three most cohesive as well as high-ranking areas.

There are 18 instances where a BSR-country ranks among the top-10 for a component, most frequently when it comes to registering property (4) and to resolving insolvency (4), i.e. features that are closely related to the efficiency of the government administration. At the other end of the spectrum the one component where the Region on average performs poorly (39.4 as average score) and where almost every second country (5 of 11) is on rank 50 or worse is the protection of minority investors with only Norway among the top-10; perhaps a reflection of the Region's predominantly civil law heritage.

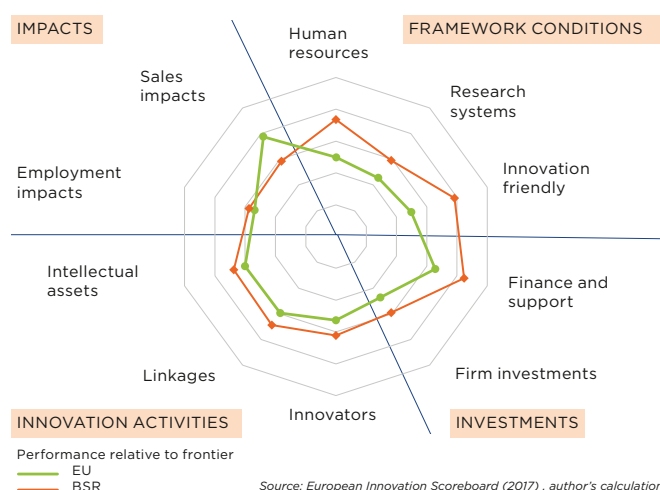
A country that stands out is Russia which has its overall standing eroded by being way below its average ranking for no less than four components (electricity, minority protection, construction permits and cross-border trade); it is also the country with the highest standard deviation with regard to its ranking, indicating a very uneven business climate. The countries with the most uniform climate are Denmark and Latvia. The latter it should be noted again is doing much better in this type of international comparison than in the global competitiveness index; something that raises hope for future prosperity growth.

⁶ Russia is not covered in the European Innovation Scoreboard; averages for and references to the Baltic Sea Region thus refer to the eight EU-members of the BSR and Iceland and Norway.

INNOVATIVE CAPACITY

As a prosperous Region, the Baltic Sea countries have to offer an environment that supports innovation and entrepreneurship. Also in this year's State of the Region Report we are analysing the results of the European Innovation Scoreboard,⁶ an assessment in which the countries continue to do well with regard to the competitiveness fundamentals. We will, in turn, look at: (i) the innovation scoreboard 2017 which in its revised version provides a performance profile for the region as such according to ten key variables in four dimensions; a performance overview where we compare the BSR with the EU as a whole and where we also point out the high and low performers; (ii) a performance overview where we compare the BSR with the EU as a whole and also point towards the high and low performers; and (iii) we will through a number of exhibits try to pinpoint the performance with regard to particular aspects as well as the performance of the individual countries over time.

FIGURE 36

INNOVATION SCOREBOARD 2017
PERFORMANCE PROFILE OF THE BALTIC SEA REGION

Source: European Innovation Scoreboard (2017), author's calculations

In the innovation scoreboard of this year there are some novelties with regard to categorization; it now looks at ten variables (4 categories) as compared to eight variables (3 categories) in the 2016 State of the Region Report. Just like in 2016, the BSR is ahead of the EU as a whole when it comes to variables related to the framework conditions & investments. We also remain ahead when it comes to concrete activities related to innovation. However, when it comes to the impact of this lead in human resources, research systems, innovation climate- & investments, patents etc the BSR does not get the pay-off one could hope for. In terms of sales impact the BSR all of a sudden trails the EU as a whole by a margin that has grown since 2016; these problems of getting the good climate and the innovations that are generated on to the market are also reflected in the very narrow lead of the BSR when it comes to employment impacts.

The pattern of relative strengths and weaknesses of the BSR in comparison to the EU average has remained fairly stable over time (changes in methodology limit direct comparisons). The biggest advantages exist in what now is termed 'framework conditions', even though the relative strengths have moved somewhat from research systems to the human resource base. Overall the key challenge for the BSR remains even more clearly to translate strong framework conditions, investments and innovation activities into actual sales and employment.

This pattern of strengths and weaknesses is also reflected in more detail in the 2017 performance overview where we again see the BSR maintaining a lead over the EU as a whole when it comes to all aspects of human resources and an innovation-friendly environment but that the lead has been attenuated and

TABLE 5

BSR INNOVATION SCOREBOARD 2017. Performance Overview

Innovation Scoreboard 2017	EU	BSR	Top BSR Country	Bottom BSR Country		
FRAMEWORK CONDITIONS						
Human resources						
1.1.1 New doctorate graduates	1.8	2.5	3.2	DK	0.6	IS
1.1.2 Population completed tertiary education	38.2	43.5	54.9	NO	30.5	DE
1.1.3 Lifelong learning	10.8	20.2	29.6	SE	3.7	PL
Attractive research systems						
1.2.1 International scientific co-publications	494.1	479.4	2911.0	IS	264.1	LV
1.2.2 Scientific publications among top 10% most cited	10.6	10.6	13.4	DK	4.0	LT
1.2.3 Foreign doctorate students	25.6	20.8	33.4	IS	1.9	PL
Innovation-friendly environment						
1.3.1 Broadband penetration	13.0	23.0	32.0	SE	11.0	PL
INVESTMENTS						
Finance and support						
2.1.1 R&D expenditure in the public sector	0.71	0.9	1.2	DK	0.5	LV
2.1.2 Venture capital investments	0.063	0.1	0.1	EE	0.0	DE
Firm investments						
2.2.1 R&D expenditure in the business sector	1.30	1.6	2.3	SE	0.2	LV
2.2.2 Non-R&D innovation expenditure	0.76	0.9	2.0	LT	0.3	DK
2.2.3 Enterprises providing ICT training	22.0	27.6	42.0	NO	10.0	LT
INNOVATION ACTIVITIES						
Innovators						
3.1.1 SMEs with product or process innovations	30.9	37.0	44.3	IS	11.9	LV
3.1.2 SMEs with marketing or organisational innovations	34.9	36.7	49.1	DE	11.4	PL
Linkages						
3.2.1 Innovative SMEs collaborating with others	11.2	13.2	20.6	IS	2.8	LV
3.2.2 Public-private co-publications	28.7	63.8	170.2	IS	0.5	LV
3.2.3 Private co-funding of public R&D expenditures	0.05	0.1	0.1	DE	0.0	PL
Intellectual assets						
3.3.1 PCT patent applications	3.70	5.9	9.6	SE	0.3	LV
3.3.2 Trademark applications	7.60	8.9	15.0	EE	2.9	NO
3.3.3 Design applications	4.33	4.5	7.9	DK	0.1	NO
IMPACTS						
Employment impacts						
4.1.1 Employment in knowledge-intensive activities	14.1	15.4	19.8	IS	9.7	LT
4.1.2 Employment fast-growing firms innovative sectors	4.8	4.7	6.0	SE	2.8	EE
Economic effects						
4.2.1 Medium & high tech product exports	56.2	46.7	67.6	DE	10.6	IS
4.2.2 Knowledge-intensive services exports	69.3	67.7	76.8	NO	21.0	LT
4.2.3 Sales of new-to-market and new-to-firm innovations	13.37	8.2	13.3	DE	5.3	LV

Source: European Innovation Scoreboard (2017)

even overtaken when it comes to aspects of an attractive research system; for example, the EU as a whole has a better situation when it comes to foreign doctorate students and is now on par with the BSR with regard to scientific publications. With regard to the investment indicators the BSR on average retains its advantage over the EU as a whole, even though the performance overview also points to the significant dispersion across the region. Also in innovation activities the BSR retains an advantage even though there were absolute drops with regard to, for example, community trademarks and designs.

Finally, looking at what is now termed impacts (previously outputs) the EU has established a lead over the BSR in four out of five variables; only in employment in knowledge-intensive activities does the BSR retain a narrow lead over the EU. Worrisome is that not only has the other EU countries improved faster than the BSR-countries but there are key areas where we see absolute declines for the BSR, for example employment in fast growing enterprises and sales of new to market and new to firm innovations.

The developments over time are summarised in the figure where we compare the developments (2011-2016) in the BSR with that of the EU as a whole, according to the broad categories (plus the overall Summary Innovation Index). The categories are ranked from those with the highest relative strength of the BSR (blue) to those with the least (orange), and as pointed out the human resources of the BSR remain its forte. This asset is complemented by the region's strength in establishing and developing research systems and innovation friendly environments; areas where the BSR has not only made significant progress over the preceding five-year period but also where it retains a comparative advantage over the EU as a whole.

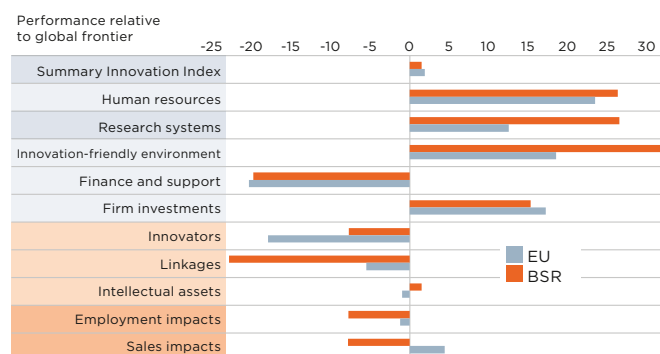
Areas where the region has lost out in recent years and even backtracked in absolute terms are as indicated, indicators on finance and support, and those related to linkages between the innovative environments and others. It is also perhaps the result of backtracking on these factors that becomes visible in the two impact areas (sales & employment) where we now see a long-term trend whereby the BSR does not get the pay-off that one could perhaps hope for given the very positive framework conditions.

Turning to look at the Summary Index over time (2009-2016) it is noteworthy that the BSR (excl. RU) despite the above-mentioned worrisome signs managed to retain a relatively stable lead as compared to the EU and that the trend overall is slightly positive in the post-crisis period. Internally, however, there remain stark disparities with the Nordic countries and Germany all scoring above the EU average; albeit with a clearly noticeable downward trend for all countries except for Sweden. Among the EU-2004 members we can make note of the long-term gains for Lithuania, which after the declines in Estonia in 2016 put the two close to par in the Summary Index.

Looking at individual countries, Sweden remains the leader in the EU and the Baltic Sea Region. But the gap towards the overall leader of the European Innovation Scoreboard (EIS), Switzerland, has continued to increase over time (from 2009) as well in the last year. Denmark lost 3.3 points last year but retained its position as the third country overall and the second-best performer among

FIGURE 37

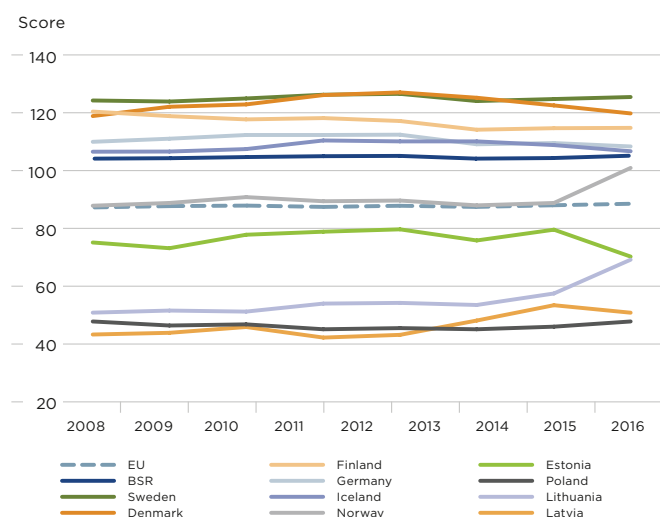
INNOVATION SCOREBOARD 2017 BALTIC SEA REGION VS. EU BY BROAD CATEGORY



Note: Colouring reflects relative strengths (blue)/weakness (red) of the BSR
Source: European Innovation Scoreboard (2016) , author's calculations

FIGURE 38

INNOVATION SCOREBOARD 2017 PERFORMANCE OF BSR COUNTRIES OVER TIME

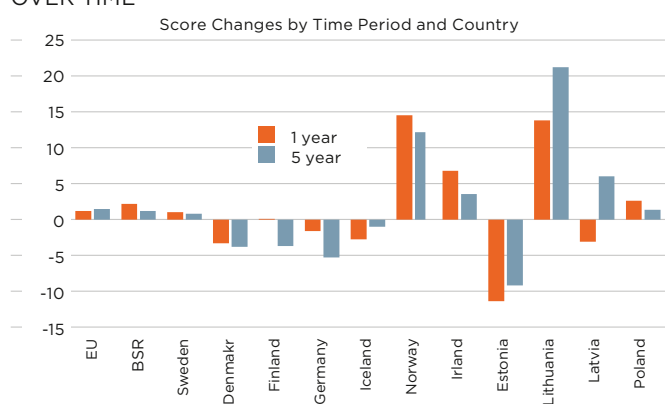


Source: European Innovation Scoreboard (2017) , author's calculations

the BSR-countries. The other three countries from the Region making it to the top-10 of the EIS are Finland (4), Germany (7) and Iceland (8). Of these it is Finland that stands out with a gradual slipping since 2009, down one notch in ranking and down a high 7.1 points in overall score. By comparison, Germany and Iceland, which both are down one notch in overall rank compared to 2009 have moved significantly less with regard to points, Germany down 2.3 points and Iceland actually up 0.3 since 2009. Despite not (yet) being among the top-10 the strong gains of Norway should be mentioned; the country gained 14 points in the last year alone, rising from 15th to 12th rank.

FIGURE 39

INNOVATION SCOREBOARD 2017 PERFORMANCE OF BALTIC SEA REGION COUNTRIES OVER TIME



Source: European Innovation Scoreboard 2017

Looking at the 2004 member states Lithuania (rank 20) has made the most progress, gaining seven notches since 2009 and increasing its overall score by 22 points. Following it by a slim margin (0.4 points) is Estonia. Latvia, too, has improved its overall score compared to 2009 even though a recent slip (-3.1) saw its rank drop from 29th to 30th, just ahead of Poland that climbed to 31st rank following a gain of 2.6 points in the last year.

A closer analysis of the changes over the course of the last year point both to the very strong performance of Norway which increased its score in seven out of the 10 categories; with its strongest gains in innovators (+61.7) and linkages (+25.5) but also with significant progress in firm investments (+22.5) and an innovation-friendly environment (+18.4). Sweden recently strengthened its position in above all firm investments (+18.2) and (like Norway) an innovation-friendly environment (+15.7); a minor but still welcome gain was noted with regard to sales impact (+4.8). At the same time Sweden lost position in four categories, above all employment impact (-15.2), innovators (-7.8) and finance & support (-6.2). Germany saw an even spread of gains and losses (5 of each) with (like Sweden) the greatest loss when it came to employment impact (-14.5). It should be noted though that when it comes to sales impact Germany remains by far the most successful BSR-country (second only to the UK & Ireland in the EIS).

Among the group of 'eastern' BSR countries last year saw close to across-the-board improvements in Lithuania that improved its position in all categories except for employment impact (-3.4) and an innovation-friendly environment (-1.0); the greatest gains were in innovators (+48.7), firm investments (+28.9) and linkages (+19.2). For neighbouring Latvia, the most disconcerting development in the last year was a significant erosion of firm investments (-40.5); the overall decline was held at bay by strong gains in innovation-friendliness (+23.2), finance & support (+21.7) and human resources (+9.2). In Estonia, last year saw significant declines in six of the ten categories, most notable in innovators and firm investments; on the positive side was a strong improvement in sales impact (+8.3; second only to Lithuania with its + 8.8) as well as human resources (+10.5). Poland based its gain in the overall index (+2.6) on improvements above all in innovation-friendliness (+21.8) and firm investments (+10.5). Positive for the eastern countries was an across the board improvement in human resources as well as sales impact.

A particular structural concern that was given significant attention in the 2016 State of the Region Report was the relative weakness on innovation outputs, i.e. what in this year's report was discussed under the heading of impacts and also on the issues of linkages. Both of these relative weaknesses continue to affect the Region. With regard to sales impacts, all countries with the exception of Germany continue to score below the EU average; positive though is that seven of the ten countries recorded improvements in this respect. As for the question of linkages the absolute position of the Region may not appear as acute with seven countries (DK, DE, LT, FI, SE, NO & IS) being above the EU-average; however, in this category last year saw significant declines in the scores for no less than six of the ten countries (DK, DE, EE, LV, FI & SE). For the future, it is thus of high importance to give attention also to these questions as these linkages are key to transforming the good work reflected in strong positions with regard to framework conditions and investments, into actual pay-offs on the market.

A look at the subnational regions according to NUTS-2 in the BSR and Europe give reason to contemplate the fact that competition with regard to innovation performance is increasing. The share of European regions classified as either 'leaders' or 'strong' on innovation has compared to last year risen from 47 to 53 per cent. On the one hand, it is very positive that compared to last year the number of subnational regions from the BSR that are defined as innovation leaders have increased to 14 (+3); on the other hand, the total number of European regions receiving this classification has increased to 53 (+17) resulting in a drop from 30 to 26 per cent for the share of leading regions coming from the BSR. Also, the divisions within the Region are also underlined by the fact that it still remains for any of the NUTS-2 regions in Estonia, Latvia, Lithuania or Poland to be classified as either leader or strong with regard to innovation.⁷

An important indicator of innovative capacity translating into economic activity is the presence of companies from the Region among the top 1000 R&D spending companies in the European Union.⁸ While the three Nordic EU-members in the Region remain strongly overrepresented – they account for in excess 15 per cent of the top-firms relative to a GDP share of roughly 10 per cent in the EU – they have lost ground during the past decade. In 2015 the total number of firms dropped significantly, and Sweden alone lost 10 firms from the top-1000, and despite a small increase in 2016 (+3), the total standing of the Nordic EU-members has not improved in the last year. In a longer time period (from 2006 onwards) Finland is the country that steadily, year-by-year, lost firms from the list of top-1000 R&D spenders, down from 70 to 39 (-44%).

A closer look at the data again reveals a tremendous concentration of private sector R&D spending in a small number of companies. The top four companies alone account for 54 per cent of the total R&D spending of the 156 leading R&D spenders from the Region on this list. The figure represents a decrease year-on-year by three (3) percentage points and follows significant cuts in R&D spending among the three largest firms on our list (Ericsson, Nokia and Volvo) that is not fully compensated for by the 9.2 per cent increase of the other 152 firms. With this concentration, it remains that the fortunes of a small number of firms have potentially far reaching effects for the national and BSR innovation systems.

Looking at the sectorial patterns of private R&D spending among the 156 leading spenders in the three BSR-countries covered above they together commanded more than 18 billion Euro during in the most recent period and their investments spanned across no less than 29 different sectors. Breaking this down in the figure below we nevertheless see that three sectors dominate their spending: (i) *technology hardware & equipment* (36%/€6.5bn); (ii) *industrial engineering* (25%/€4.5bn); and (iii) *pharmaceuticals & biotechnology* (16%/€3bn). Furthermore, investments are highly concentrated to a couple or a handful of firms per sector. In the case of technology hardware and equipment Ericsson and Nokia together accounted for €6.3 billion out of a total of €6.5 billion; the remaining €0.2 billion being spent by six other firms among

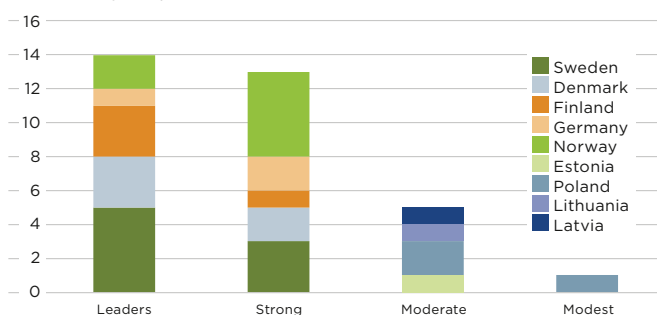
⁷ It should be noted that with data being available on a NUTS-2 classification Estonia, Latvia and Lithuania are represented through one single region; in the case of Poland there are three NUTS-2 regions defined as being part of the BSR. The corresponding figures for the other countries covered are 8 (SE), 7 (NO), 5 (DK), 4 (FI) and 3 (DE).

⁸ Given that the data does not give us the exact geographical location of the 217 German and one Polish firm – thus not allowing us to determine whether they should be included in our definition of the BSR, these two countries are left out in this summary.

FIGURE 40

INNOVATION PERFORMANCE 2017 REGIONS AROUND THE BALTIC SEA

Number of Regions by Innovation Performance



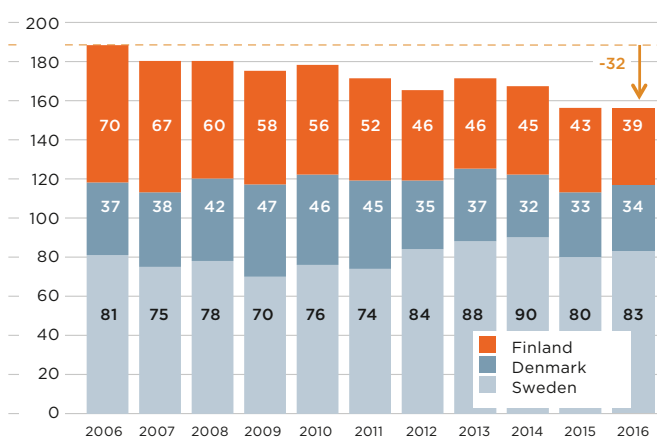
For Comparison: All European Regions – Number by Innovation Performance



Source: European Regional Innovation Scoreboard (2016)

FIGURE 41

INNOVATION SCOREBOARD: BSR COMPANIES AMONG TOP 1000 EU R&D SPENDERS



Source: European R&D Scoreboard (2016)

FIGURE 42

PRIVATE R&D SPENDING BY COMPANY IN THE BSR TOP 1000 EU R&D SPENDERS, 2015

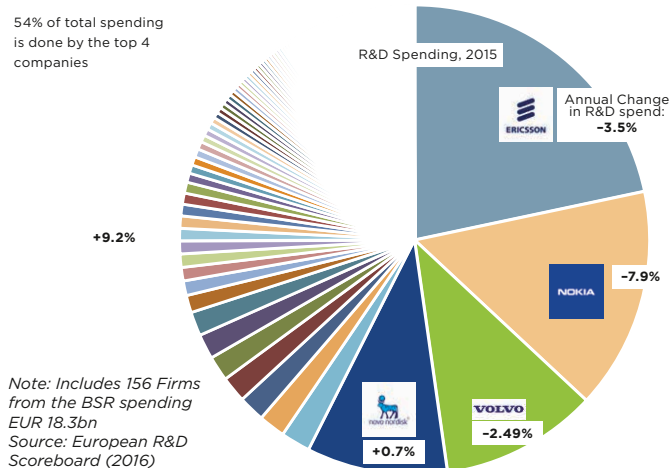


FIGURE 41

PRIVATE R&D SPENDING BY SECTOR IN THE BSR 156 BSR-COMPANIES IN EU TOP-1000 SPENDERS (€ MN/% OF TOTAL)

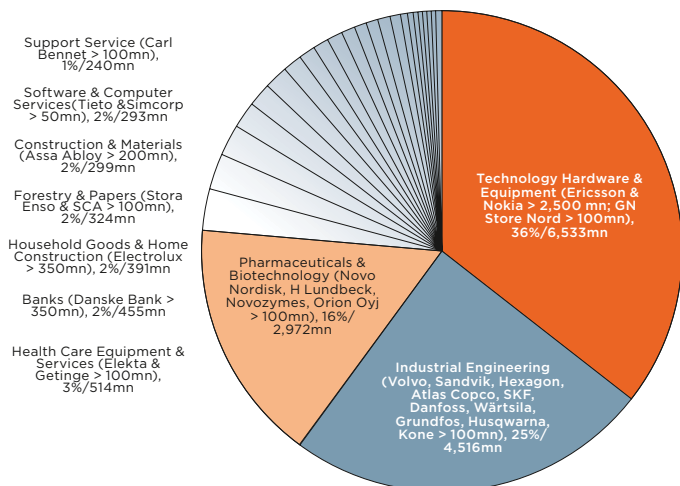
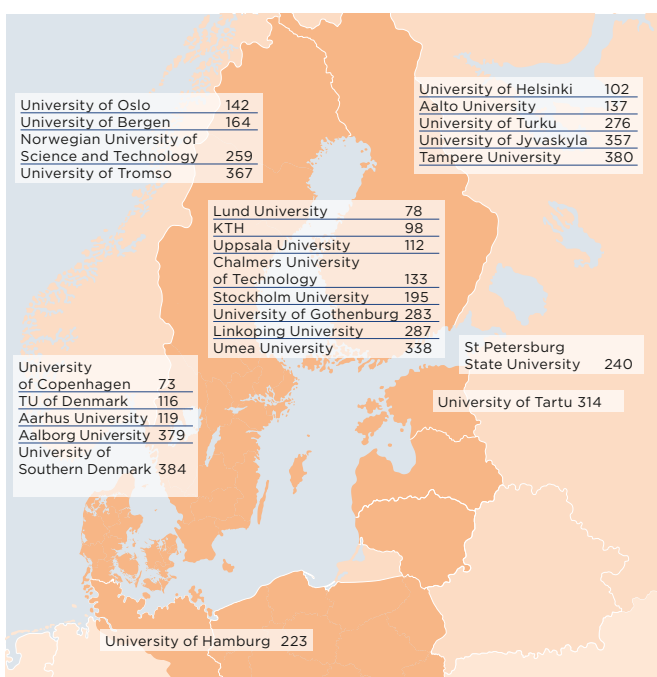


FIGURE 42

LEADING UNIVERSITIES IN THE BALTIC SEA REGION GLOBAL RANKS AMONG TOP 400, 2017



Source: QS University Rankings (2017)

the 156 covered. Only for the first two does this also reflect a relative concentration compared to peers in the rest of the EU; biopharmaceutical R&D spending is actually a smaller share of total private R&D spending in the Baltic Sea Region than in Europe overall.⁹ Sectors with lower absolute R&D spending in which the Baltic Sea Region have a strong relative position are Forestry and Paper, Leisure Goods, and Alternative Energy.

While firm R&D is one important step in the innovation process, it often builds on the underlying foundations of the academic system for providing access to skills as well as conducting fundamental research. The Baltic Sea Region is well represented among the leading universities of the world, with 25 among the top 400 according to the most recent listing. But it remains the case that even the best universities in the Region are some distance behind the leading academic institutions globally and in Europe. This is not fully captured in the data on research systems in the Innovation Scoreboard, where the small size of many Baltic Sea Region countries creates higher counts of international collaboration.

In the Region, there are now three universities among the global top-100, University of Copenhagen (-5), Lund University (-5) and Royal Institute of Technology (-1). As compared to last year both Uppsala University (-14) and University of Helsinki (-11) dropped out of the top-100. In the region, there were only eight of the universities now on the top-400 that actually managed to climb in the global ranking and the biggest improvements were recorded for University of Tartu (+33), Saint Petersburg State University (+18) and University of Bergen (+13). Adding to the catch-up of the south-eastern part of the Region is the impressive gain by Vilnius University (+80) that is just outside the top-400 with a 401 ranking.

The biggest declines were recorded for Umeå University (-44), University of Turku (-42) and University of Oslo (-29). In addition, one university from the Region dropped out of the top-400 this year University of Eastern Finland (-69; now on 451) and the year before that, Lappeenranta University of Technology (now down to rank 501).

OVERALL OBSERVATION

The Baltic Sea Region continues to perform strongly in terms of prosperity and competitiveness. There is significant heterogeneity within the Region but also continued convergence. 2016 has been a particularly strong year, driven by the supportive macroeconomic environment described in the previous section.

The key challenge is the slowdown in overall productivity growth and in the rate of convergence in the aftermath of the global crisis. The current growth has done little to revive productivity growth. With the productivity slow-down a more global challenge, and the Region still doing well, the main culprit is likely to be in structural features of the global economy. That this is creating a new set of issues for the Region is already visible in the soft trade and FDI performance. The Region and its member countries need to rethink how to compete in this new global economy.

⁹ Note that the data is biased in counting all of a company's R&D spending in the country where its headquarter is located. This matters for Sweden, where a strong, R&D intensive pharmaceutical industry has now for some years been under foreign ownership.

BALTIC SEA REGION COMPETITIVENESS: THE SUBNATIONAL REGION PERSPECTIVE

Economic Dynamics across Subnational BSR regions
The BSR Regional Potential Index



BALTIC SEA REGION COMPETITIVENESS: THE SUBNATIONAL REGION PERSPECTIVE

In this section, we explore how the overall trends of prosperity and competitiveness tracked at the macro-regional and national levels in the previous chapter of the Report have played out across the Region's subnational regions. New research by the OECD has drawn renewed attention on subnational regions: the OECD-wide data shows parallel processes of convergence across nations and divergences across regions within nations. The latter is often driven by metropolitan areas racing ahead while less densely populated areas are falling behind. The aim of this section is to explore whether these broader dynamics are playing out in similar ways across the Baltic Sea Region.

The indicators we look at follow broadly the structure used in the previous section, but is now applied to subnational regions. As far as possible we focus on NUTS 3 regions; where that data is not available we look at NUTS 2 regions. We use the European Commission's classification of regions into urban, rural, and intermediate regions to track whether there are systematic differences across these categories within countries.¹⁰ The data and figures draw on material available from Nordregio, ESPON, OECD, Eurostat and other sources.¹¹

In the first part of this section we look at key indicators of economic performance, following broadly the structure used in the previous chapter. We put slightly more weight on changes in population; our hypothesis is that migration within countries is a more important adjustment mechanism as populations react to within-country differences in labour productivity and mobilisation. We finally also look at within-country differences in competitiveness foundations, especially the presence of human capital, as a potential driver of the performance patterns we observe.

In the second part of this section we then document results from the Baltic Sea Region Regional Potential Index (BSR-RPI). The index, which is based upon demographic, labour force as well as economic performance characteristics, was created by Nordregio on behalf of Tillväxtverket, the Swedish National Agency for Economic and Regional Growth.

The data reveals a Baltic Sea Region characterized by large prosperity differences not only across but also within regions. While there is clear convergence across nations, the analysis of subnational regions has shown that within countries the patterns are much more diverse. There is a lot of variation within groups; individual regions have significant leeway in charting their course.

But there are also clear overall patterns, related to the impact of economic density on performance. We see an increasing divergence between the dominant urban regions and others, especially rural regions. This divergence occurs to a high degree through migration, both within countries and from the outside. With the economically most active moving, this also drives up labour mobilisation rates in urban regions. There is also a significant productivity gap between urban regions and the rest. Behind these growing differences in outcomes is a tendency especially for higher educated people to co-locate in urban centres that provide more opportunities. Productivity growth rates, however, seem more driven by national factors than by regional types.

ECONOMIC DYNAMICS ACROSS SUBNATIONAL BSR REGIONS

SUBNATIONAL REGIONS ACROSS THE BALTIC SEA REGION

The Baltic Sea Region as defined here includes 35 so-called NUTS 2 regions and 129 NUTS 3 regions.¹² Where possible we use NUTS 3 level data, but for some indicators data availability is limited to the eight EU member states and for other data is only available at the level of NUTS 2. The European Commission further classifies regions as being urban (U), intermediate (IM), or rural (R); for the entire EU roughly 300 regions fall into the first category and 500 each into the second and third category. The Baltic Sea Region's EU member countries are in these statistics covered through 108 NUTS 3 regions; 17 urban, 53 intermediate, and 38 rural.

¹⁰ http://ec.europa.eu/eurostat/statistics-explained/index.php/Urban-rural_typology

¹¹ Nordregio (2016), Trends, challenges and potentials in the Baltic Sea Region; www.tillvaxtverket.se.

¹² There exist three levels of the Nomenclature of Territorial Units for Statistics (NUTS), which is a hierarchical system for dividing up the economic territory of the EU (and associated territories, e.g. Norway and Iceland) for the purposes of statistics, socio-economic analysis and policy enactment. In the most current classification (valid from January 2015) there are 98 regions at NUTS 1, 276 regions at NUTS 2 and 1342 regions at the NUTS 3 level in the European Union. No official equivalent exists for Russia.

TABLE 6

SUBNATIONAL REGIONS ACROSS THE BSR: GENERAL CHARACTERISTICS

Region	NUTS-level			Urban vs Rural			Size characteristics		
	1	2	3	U	IM	R	pop.	km2	density
Northern Germany: 3 Länder [Hansestadt Hamburg, Mecklenburg-Vorpommern & Schleswig-Holstein]	3 (16)	3 (308)	24 (402)	4	12	8	6.3	39,692	159
Denmark: whole	1	5	11	2	5	4	5.7	42,391	134
Estonia: whole	1	1	5	1	1	3	1.3	45,336	29
Finland: whole	2	5	19	1	6	12	5.5	338,424	16
Iceland: whole	1	1	2	1	0	1	0.3	102,775	3
Latvia: whole	1	1	6	2	2	2	1.9	64,589	29
Lithuania: whole	1	1	10	1	7	2	2.8	65,300	43
Norway: whole	1	7	19	3	7	9	5.3	323,802	16
Northern Poland: 3 Voivodeships [Zachodniopomorskie, Pomorskie & Warminsko-Mazurskie]	2 (6)	3 (16)	12 (72)	1	9	2	5.5	65,381	84
Sweden: whole	3	8	21	5	11	5	10	450,295	22
Northwestern Russia: northwestern region [excl. Komi, Arkhangelsk, Nenets & Vologda]	1* (8)	7* (11)	n.a.	n.a.	n.a.	n.a.	10	535,700	19
Baltic Sea Region [SORR definition]	16 (13 EU)	35 (20 EU)	129 (108 EU)	21 (17)	60 (53)	48 (38)	55	2.1 mn	26 (34)

* Russia is not part of the official NUTS nomenclature; data for reference only

On average, the Baltic Sea Region is sparsely inhabited with a population density of roughly one-fifth (26/km²) of the EU-28 average (117/km²). However, the distribution of population as well as economic activity across the Region is highly skewed with a few metropolitan centres playing a dominant role. Focusing only on the EU members in the BSR, we find 20% of the total population to be located in just 5 regions; more than 50% in the top 25 regions. For GDP, the distribution is even more skewed: Here 10 regions account for 20% of total GDP and 10 for 50%.

While many see the BSR as a sparsely populated region, the reality is that its degree of urbanization is comparable or higher than in the rest of the EU. Particularly capital cities play an important role. In the Nordic-Baltic countries the capital cities proper in 2016 accounted for the between 16-23 per cent of the total population; in northern Europe only Dublin (25%) had a higher share.¹³

POPULATION TRENDS

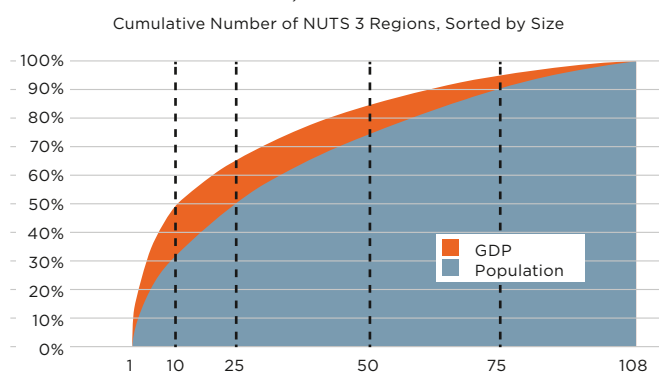
Overall population trends across the Baltic Sea Region have been characterized by two opposing trends: the Nordic countries have gained population through immigration and robust demographics, while the three Baltic States have lost in excess of 25% (2 million) of their total population since the 1990s.¹⁴ Emigration from the Baltic countries has gone through a number of different stages. After regaining independence there was significant out-migration of parts of the Russian population. The next phase then came with the opening of labour markets in Sweden, the UK, and Ireland once the Baltic countries joined the EU in 2004; access to other EU members' labour markets followed a few years later. And finally, the deep crisis of 2007 triggered another wave of Baltic citizens looking for opportunities abroad. In more recent years trends have shifted somewhat. In Estonia, for example, the overall population decline came to a halt in 2015.

¹³ Stockholm, 15.5%; Oslo, 19.3%; Copenhagen, 22.5% & Helsinki, 21.7%; see, United Nations (2016), The World's Cities in 2016 – Data Booklet, ST/ESA/SER.A/392; the comparable figure for London was 16%.

¹⁴ Latvia has been worst hit with a total population decline of 37 per cent (1990-2016); comparable figures for Estonia and Lithuania are -16 and -22 per cent, respectively.

FIGURE 43

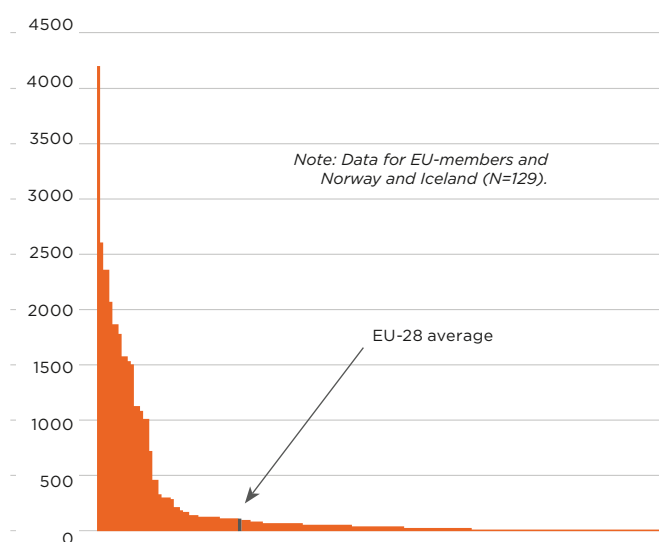
CONCENTRATION OF GDP AND POPULATION EU BSR NUTS 3 REGIONS, 2014



Source: Eurostat (2017); author's calculations

FIGURE 44

POPULATION DENSITY AMONG BSR SUB-NATIONAL REGIONS (INHABITANTS/KM², 2015, NUTS 3, EXCL. RU)



Source: Eurostat (2017); authors' calculations

FIGURE 45

POPULATION ACROSS EU BSR SUBREGIONS RELATIVE SHARES, 2000 – 2014

	URBAN	INTERMEDIATE	RURAL
NORTHWEST	26% (+2.3%)	28% (+0.9%)	16% (-0.6%)
SOUTHEAST	8% (-0.5%)	17% (-1.5%)	5% (-0.7%)

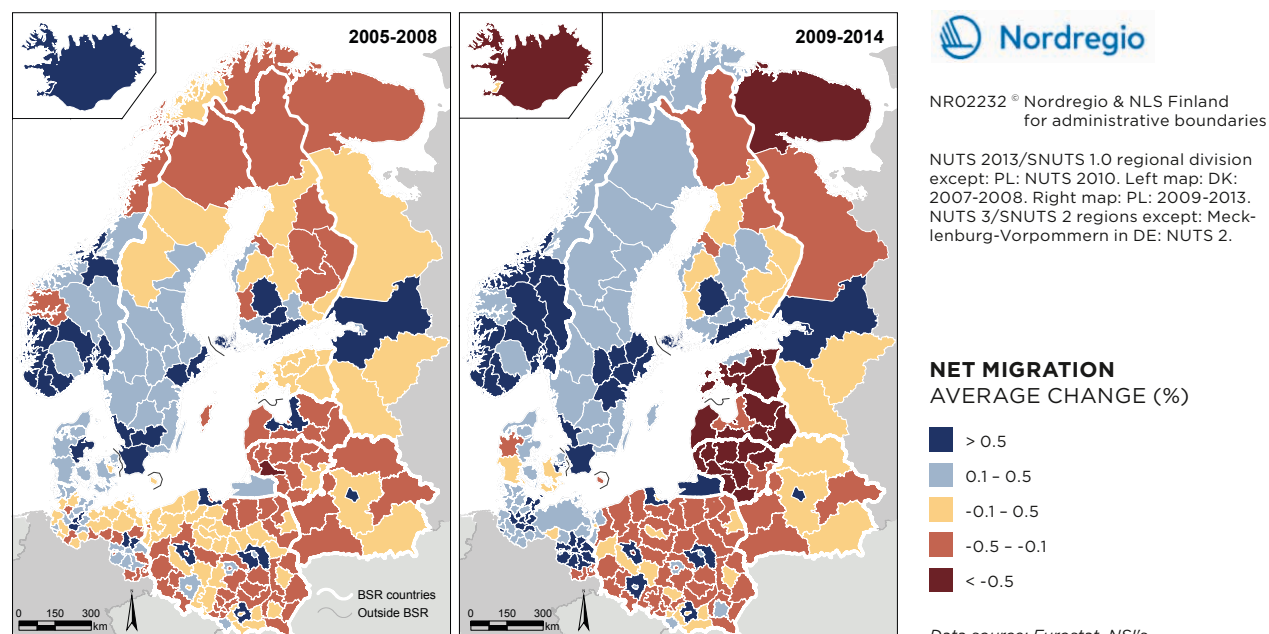
Source: Eurostat (2017); authors' calculations

Looking more specifically at types of regions, we find that across the Region urban areas have gained position. They gained on average 7 per cent of population since 2000; for intermediate regions, total population remained stable while it dropped by 5 per cent in rural regions. The same patterns are visible for each of the two geographic groups in the Northwest and Southeast separately. In absolute terms, urban regions in the Northwest gained about one million inhabitants since 2000, and intermediate regions 500,000. All other region types lost population, most so intermediate regions in the Southeast with a decrease of almost 500,000.

Net-migration rather than internal demographic trends play a critical role in explaining these patterns. The patterns for the EU member countries in the BSR are generally reflected also in the other parts of the Region. In Northwest Russia in particular, population is concentrating in the highly urbanised St. Petersburg region.

FIGURE 46

NET MIGRATION ACROSS EU BSR SUBREGIONS. PERIODS BEFORE AND AFTER THE GLOBAL CRISIS



Source: Nordregio (2016)

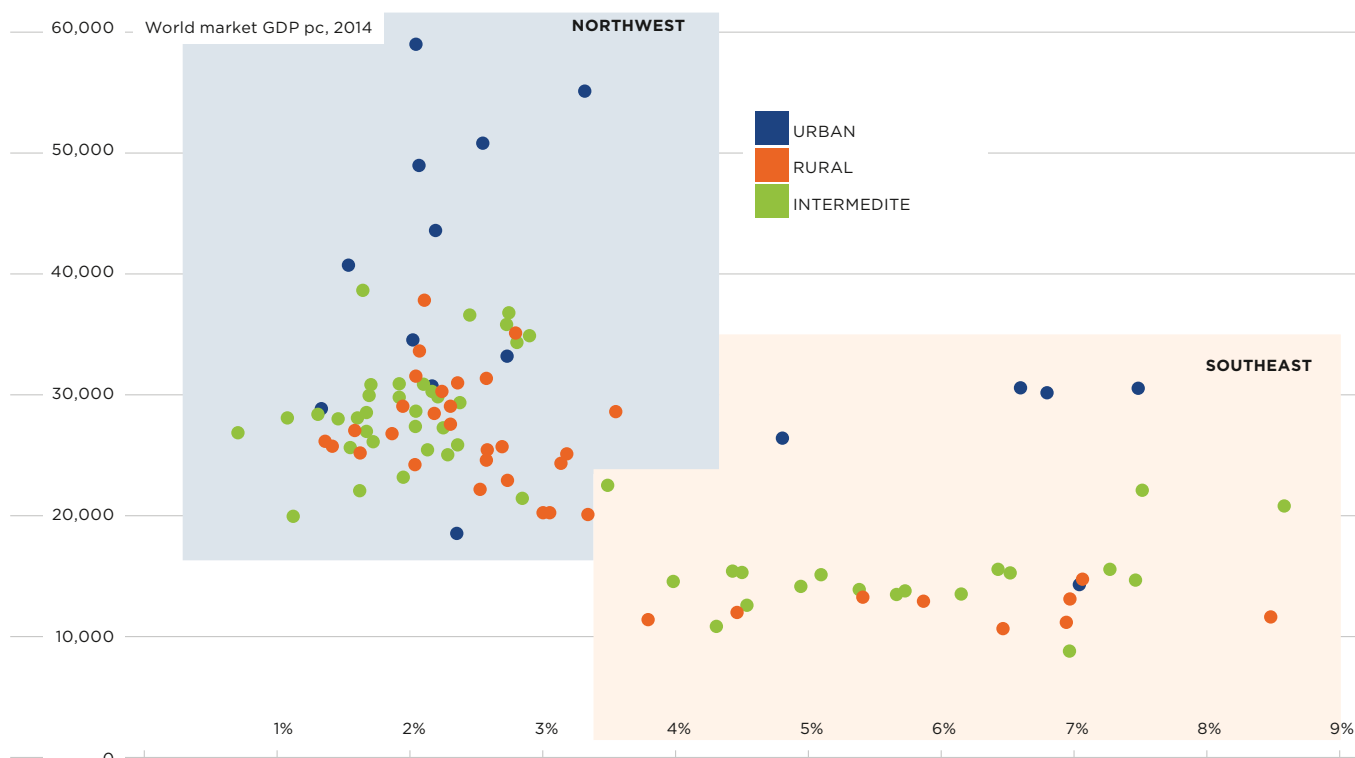
PROSPERITY TRENDS

Prosperity differences across the BSR are significant; this finding from the analysis of national data in part B of the SORR is confirmed when looking at subnational regions. The most prosperous region registers a GDP per capita level about six times that of the poorest region, even after adjusting for purchasing power parities. This gap is almost three times as large as across countries in the BSR.

Prosperity growth rates, too, differ significantly. Looking across all regions, the pattern of convergence discussed in part B seems to emerge here as well. More prosperous regions tend to grow more slowly than less prosperous regions. But if we look at groups of countries at roughly similar stages of performance, a different impression emerges: there is no clear relationship between prosperity level and growth.

FIGURE 47

PROSPERITY DYNAMICS ACROSS EU BSR REGIONS NUTS 3 REGIONS, 2000 – 2014



Source: Eurostat (2017); authors' calculations

All across the Baltic Sea Region the most densely populated regions are also those that register the highest level of prosperity. In terms of absolute levels, of course, the regions with the highest GDP per capita are in the Northwest part of the BSR (e.g., Hamburg, Stockholm, Copenhagen & Helsinki). But also in the Baltic countries and in Northern Poland the largest cities have significantly higher levels of prosperity than the rural regions in the same country.

This prosperity benefit of large urban centres (note that this is after accounting for purchasing power differences) is significant; in 2014 GDP per capita in urban regions was 70 per cent higher than in the average of all other regions. It is particularly high in the south-eastern part of the Region, where it has also increased over time. In this part of the Region we see divergence among the most prosperous regions and the rest. In the Northwest, the patterns are more complex; while urban regions did well, there are also many rural regions that have been able to grow prosperity at a solid rate. In both the Southeast and the Northwest intermediate regions were finding it most difficult to achieve prosperity growth.

LABOUR PRODUCTIVITY AND MOBILIZATION

Prosperity differences are driven by differences in labour productivity and mobilisation. These differences are strongly affected by national factors as we have documented in part B of this Report. But the data does also reveal a marked difference between urban and rural regions within countries on these measures.

FIGURE 48

LABOUR PRODUCTIVITY ACROSS TYPES OF REGIONS EU BSR NUTS 3 REGIONS, 2014

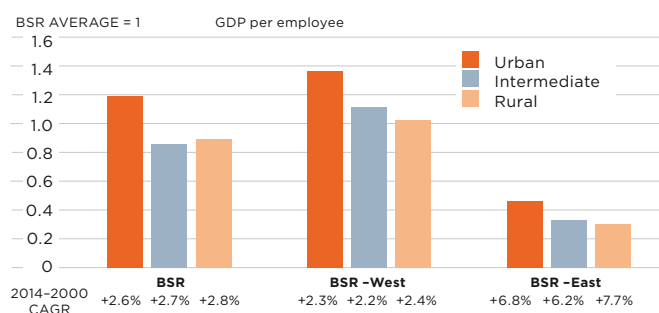


FIGURE 49

LABOUR MOBILIZATION ACROSS TYPES OF REGIONS EU BSR NUTS 3 REGIONS, 2014

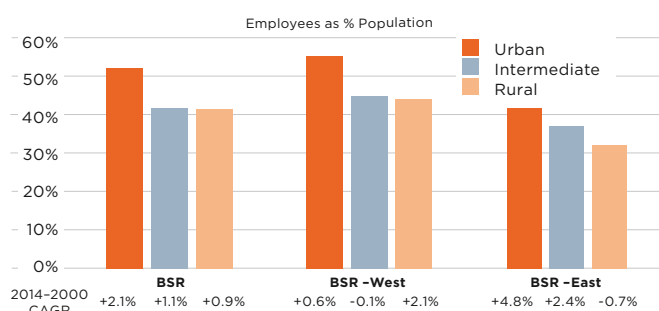
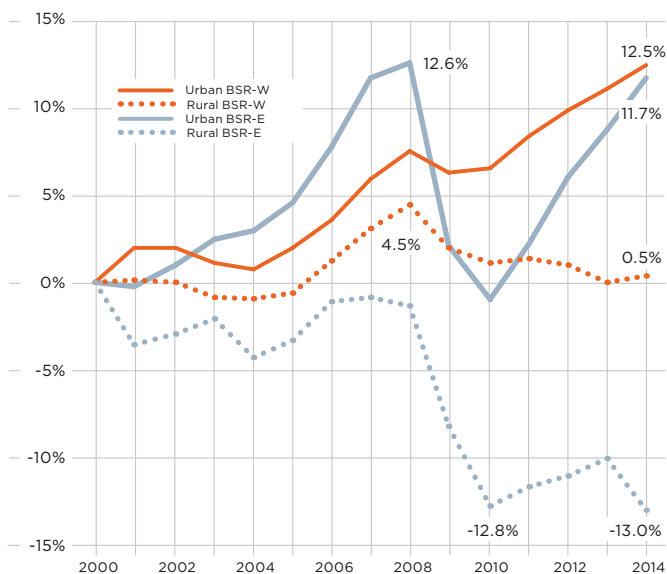


FIGURE 49

COMPETITIVENESS FOUNDATIONS ACROSS EU REGIONS SUBNATIONAL BSR REGIONS (NUTS 3), 2000-2014

No. of employed persons, % change compared to year 2000



Source: Eurostat (2017); author's calculations

For *labour productivity*, we find urban than rural regions to achieve close to 40% higher levels of GDP per employee than rural regions. This performance gap has marginally decreased over time, largely because it has come down somewhat in the south-eastern region where it had been particularly high. Looking across types of regions it seems again the intermediate regions are struggling the most; they are in both geographical sub-regions the ones with the lowest productivity growth rate. They only look better for the average of the BSR because intermediate regions in the more productive Northeast have relatively gained weight. Overall, however, it is remarkable that the differences in productivity growth rates across types of regions are relatively modest. Factors driving productivity growth seem to be mostly set at the national level.

For *labour mobilisation*, too, there are significant differences between types of regions. Employees account for about 53% of the population in urban areas; in the rest of the BSR that share is at 42%. These findings are confirmed also for non-EU parts of the Region, where data is however only available at the NUTS-2 level. The difference is somewhat more pronounced for the Northwest than for the Southeast of the Region, but the main difference is in the average level between the two geographical sub-regions. For the Northwest in particular, it is the urban regions that stick out, while the differences between intermediate and rural regions are marginal.

Over time, the gap in labour mobilisation between urban and non-urban regions has increased. This is largely due to the developments in the Southeast of the Region, where the gap was historically smaller. The crisis before 2010 hit employment across all regions; especially urban and rural regions in the Southeast which lost around 10% of jobs. But then urban regions across the BSR were able to gain jobs much faster and to a higher degree, especially in the Southeast. Compared to the low point in 2010, urban regions gained 440,000 jobs, while intermediate regions (with similar absolute employment numbers) added only 130,000 jobs. Rural regions continued to lose jobs even after 2010. Rural employment in the Southeast never really picked up after the crisis and was by 2014 down by 13% compared to 2000.

BEYOND-GDP PROSPERITY

While the prosperity differences between metropolitan and rural regions are significant, there are also some countervailing factors that suggest that the actual standards of living across these regions are more similar. Prices in urban regions tend to be significantly higher than in rural regions, and are often imperfectly captured in purchasing power adjustments. This is already captured through the purchasing power adjustment in the prosperity analysis above.

Rural regions often also provide other non-GDP related amenities that make them attractive places. The Social Progress Index (SPI) for European regions, for example, has a rural region like Northern Sweden at the very top spot in the overall ranking. While its data is available only on the NUTS-2 level, it shows that rural regions across the BSR perform systematically higher on SPI than on GDP per capita. For urban centres, this advantage is either small, as is the case for Copenhagen (+4) and Helsinki (+6), or even negative with an SPI rank below the GDP per capita rank (e.g. Hamburg, -38, and Stockholm, -15).

TABLE 7

SOCIAL PROGRESS AND PROSPERITY ACROSS EU BSR REGIONS NUTS 2 REGIONS, 2017

Region	EU SPI		GDP/capita (2015)		
	Rank	Score	Rank	SPI boost	Euro
Övre Norrland (SE)	1	82.33	35	+34	41000
Midtjylland (DK)	2	81.98	27	+25	42900
Hovedstaden (DK)	3	81.67	7	+4	61600
Åland (FI)	4	81.61	20	+16	46500
Nordjylland (DK)	6	81.36	45	+39	39600
Helsinki-Uusimaa (FI)	7	81.19	13	+6	50200
Pohjoisjältä-Suomi (FI)	11	80.41	106	+95	31300
Länsi-Suomi (FI)	14	80.27	78	+64	34200
Östra Mellansverige (SE)	15	80.16	48	+33	39100
Etelä-Suomi (FI)	16	79.98	79	+63	33800
Syddanmark (DK)	17	79.94	25	+8	43400
Stockholm (SE)	18	79.9	3	-15	64300
Västssverige (SE)	20	79.46	24	+4	44700
Mellersta Norrland (SE)	22	78.96	49	+27	39000
Småland med öarna (SE)	23	78.87	52	+29	38300
Norra Mellansverige (SE)	24	78.64	57	+34	36400
Sydsverige (SE)	26	78.48	51	+25	38500
Sjælland (DK)	27	78.25	92	+65	32900
Hamburg (DE)	44	74.21	6	-38	61700
Schleswig-Holstein (DE)	97	71.65	118	+21	30200
Mecklenburg-Vorpommern (DE)	110	71.09	165	+55	24900
Eesti (EE)	167	64.87	211	+44	15400
Pomorskie (PL)	193	60.52	241	+48	10700
Lietuva (LT)	205	59.02	227	+22	12900
Zachodniopomorskie (PL)	209	58.69	250	+41	9500
WarmińskoMazurskie (PL)	221	57.46	258	+37	7900
Latvija (LV)	245	54.6	231	-14	12300

Source: Eurostat (2017); author's calculations

COMPETITIVENESS FOUNDATIONS

The most likely candidate to explain the lack of convergence across subnational regions within BSR countries is the presence of differences in underlying competitiveness. Aggregate measures of competitiveness across the EU support this view. The European Regional Competitiveness Index shows metropolitan areas, capitals in particular, to be dominating the leading ranks of European regions. Unfortunately, this data is only available for NUTS 2 regions, which makes a more disaggregated analysis for the Baltic countries impossible.

Human capital is a central driver of competitiveness and economic performance, and is often strongly correlated with overall competitiveness fundamentals. For some key human capital indicators data is available at the NUTS 3 level. The pattern is quite clear that the prevalence of population with a tertiary education is the most marked in metropolitan areas. Most established universities and institutes of higher education are located in urban or intermediate regions. And the general research on human capital has found a strong tendency for high-skilled individuals to co-locate with other high-skilled individuals. These matching dynamics are an additional driver for the marked differences in the skill base of urban versus rural regions.

While there are then clear reasons for why the divergence between urban and rural regions is occurring, it is important to not forget the opposing forces that usually keep regional dynamics in balance: In the more advanced economies of the Northwest it was traditionally attractive to locate especially manufacturing activities in lower-wage locations outside of the main urban centres. But with the share of manufacturing falling and new activities being much more knowledge-based, especially these medium-sized regions have been facing challenges. In the emerging economies of the Southeast it is possible that investment remains concentrated in the main urban centres because they provide the right skill base and the best physical accessibility to connect to European or global value chains.

FIGURE 50

COMPETITIVENESS FOUNDATIONS ACROSS EU REGIONS NUTS 2 REGIONS, 2017

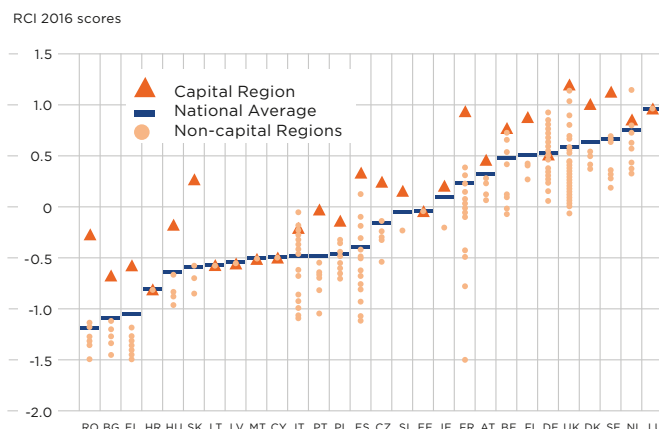
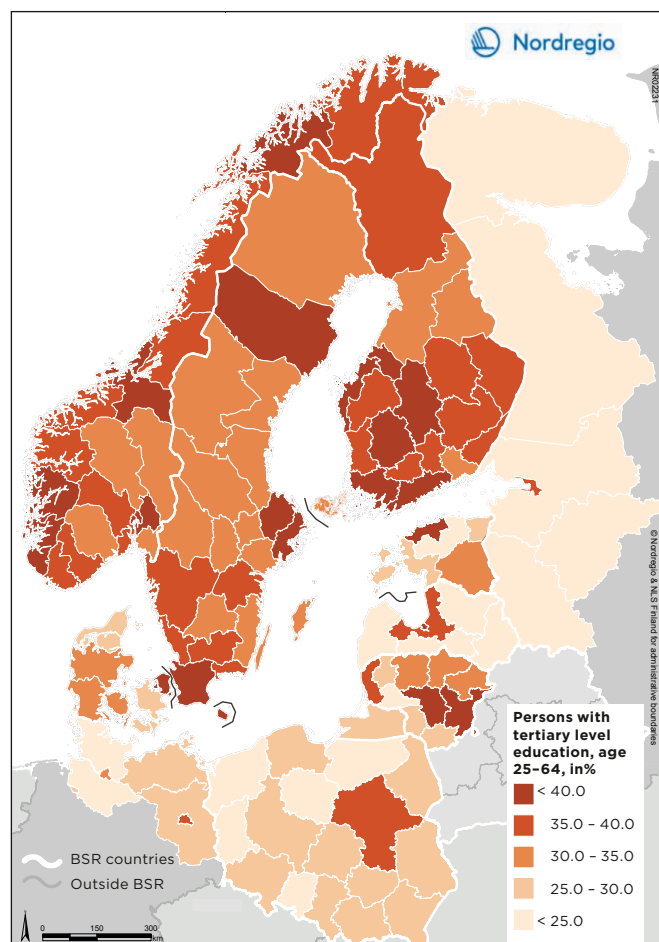


FIGURE 51

HUMAN CAPITAL INTENSITY ACROSS BSR REGIONS NUTS 3 REGIONS, 2015



Source: Nordregio (2016)

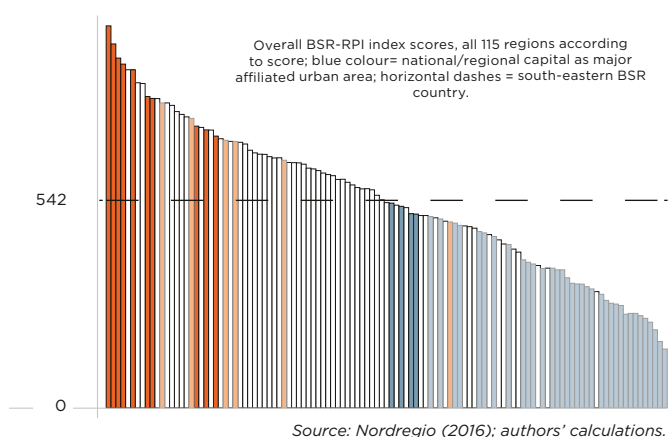
TABLE 8

THEMES, INDICATORS & INDEX WEIGHT FOR THE OVERALL BSR-RPI INDEX

Theme	Indicators & year for data	Index weight (theme/index)
Demographic potential	Population density (inhabitants/km2, 2015)	25%/8.3%
	Net migration rate (% immigrants/migrants on the total population, 2014)	25%/8.3%
	Demographic dependency (% of population [0-14 & 65+ yrs.] outside of labour force, 2015)	25%/8.3%
	Female ratio (no. of females/male [15-64 yrs.], 2015)	25%/8.3%
Labour force potential	Employment rate (%)	33.3%/11.1%
	Tertiary education (% of population [15-64 yrs.], 2015)	33.3%/11.1%
	Youth unemployment (% unemployment [16-24 yrs.], 2015)	33.3%/11.1%
Economic potential	Gross regional product/capita (2013)	66.7%/22.2%
	Total R&D investments (2013)	33.3%/11.1%

FIGURE 52

OVERALL DISTRIBUTION OF BSR-RPI INDEX SCORES



THE BSR REGIONAL POTENTIAL INDEX

As a summary indicator of current economic capacity Nordregio has developed the Baltic Sea Region - Regional Potential Index (BSR-RPI).¹⁵ The index covers 115 regions at either the NUTS 2 or NUTS 3 level in ten countries in the Nordic-Baltic Region.¹⁶ The index comprises data and insights from ten variables grouped into three themes; demography, labour force and economic potential, respectively. Within each theme the 115 regions can score between 15 (minimum) and 375 (maximum) points, making for a combined score in the range of 45-1125 points.

The BSR-RPI provides perspective on the socioeconomic structures of regions and the sub-national characteristics of prosperity creation at the sub-national level. While it is not a prediction of how growth trajectories might evolve in the future, it can be “used as a tool for creating effective regional development strategies”. We document the main findings of the BSR-RPI to provide further insights on the economic dynamics of subnational regions across the BSR.

¹⁵ Nordregio has a history of analysing and assessing developments at the regional level and the organisation's work with an index for the Baltic Sea Region forms the basis for this section. The index was first published in a 2016 report commissioned by the Swedish National Agency for Regional Growth (Tillväxtverket); the report (Trends, challenges and potentials in the Baltic Sea Region) is available at www.tillvaxtverket.se. The BSR-RPI is an extension of a similar effort in early 2016 covering the 74 administrative regions in the Nordic Region (Denmark, Faroe Islands, Finland, Greenland, Iceland, Norway, Sweden and Åland). The results of the Nordic analysis was first published in the 2016 State of the Nordic Region report, <http://www.nordregio.se/nordicregion2016>.

¹⁶ The definition of the Baltic Sea Region in this case includes the whole of Poland, western Russia and four Länder in Germany.

TABLE 9

SUMMARY OF BSR-RPI INDEX ACCORDING TO COUNTRY OVERALL-, DEMOGRAPHIC, LABOUR FORCE AND ECONOMIC POTENTIAL

Country	Regions	Q1	Q2	Q3	Q4	Q5	Overall	Demographic	Labour	Economy
	(no. of regions in each quintile)						(average score per country per cent of maximum [1125/375])			
Norway	19	10	6	3	.	.	730 65%	207 59%	270 72%	252 67%
Denmark	5	2	2	1	.	.	721 64%	229 61%	219 58%	273 73%
Germany	7	4	2	1	.	.	715 64%	244 65%	207 59%	264 70%
Sweden	21	3	8	8	4	.	622 55%	193 51%	196 52%	232 62%
Finland	19	2	2	4	10	1	561 50%	173 46%	186 50%	202 54%
Russia	7	1	.	1	3	2	444 39%	174 46%	170 45%	101 27%
Poland	16	0	1	3	6	6	417 37%	207 59%	88 23%	122 33%
Estonia	5	1	.	.	1	3	398 35%	124 33%	178 47%	97 26%
Lithuania	10	0	1	2	.	7	349 31%	131 35%	137 37%	82 22%
Latvia	6	0	1	.	1	4	324 29%	122 33%	142 38%	60 16%
Sum/Avg.	115	23	23	23	23	23	542 48%	181 48%	181 48%	181 48%

BSR-RPI: OVERALL POTENTIAL

In a summary of the results, data for the constituent regions is grouped according to country after having classified the 115 regions as belonging to one of five quintiles (23 regions/ quintile).

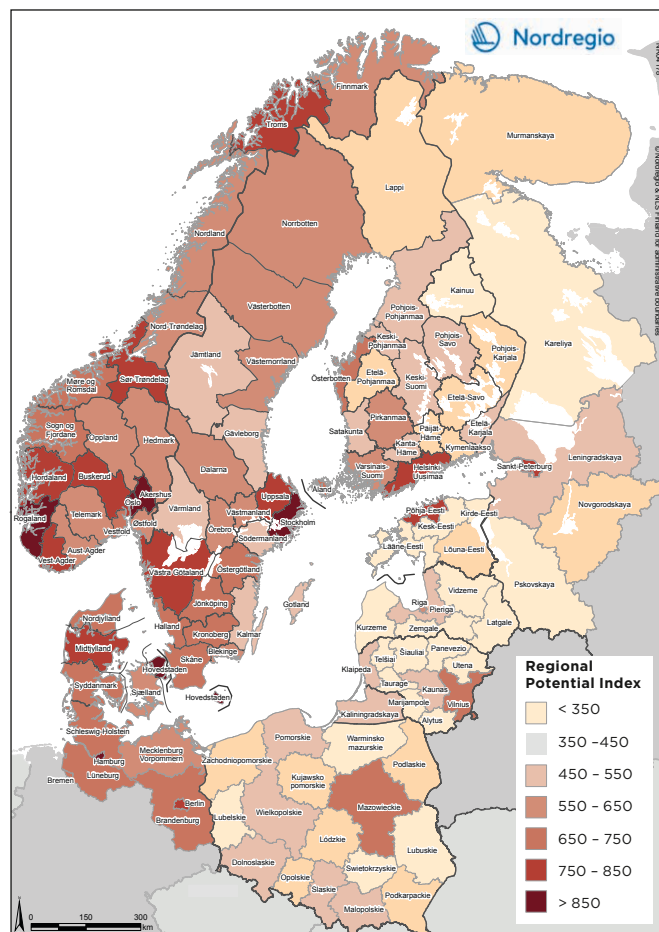
The ensuing 'national ranking' matches closely their performance on overall prosperity. There is a stark division between the 71 north-western and the 44 south-eastern regions (the so-called east-west divide) is visible in the chart summarising the overall score of all 115 regions. The south-eastern regions (horizontally dashed bars) are with the notable exceptions of five national/regional capitals all below the BSR average of 542 points.

There is also a strong correlation between high overall regional potential and being a capital or major urban area. Among the top 25 regions overall, 12 are such urban centres, including three from the south-eastern part of the BSR. Only three urban centres are not among this leading group.

Oslo as the leading region has its highest rank on the theme of demographic potential and its 4th place on labour force and economic potential, respectively. Among the underlying indicators it ranks first for net migration, level of education and GRP/capita; it also ranks high on population density and demographics dependency ratio (both at rank no. 6). Only with regard to three of the nine underlying indicators does it rank lower than 6th place, these are employment (14th), youth unemployment (27th) and total R&D investments (29th).

FIGURE 53

BRS REGIONAL POTENTIAL INDEX 2016: OVERALL SCORE BY REGION



Data source: National Statistical Institutes, Eurostat, NIFU, SSB/FoU-statistikk, World Bank, Nordregio estimates

Box A. Overall BSR-RPI index, top-25 ranking regions w. affiliated urban area/ country; bold = national/regional capital as major affiliated urban area.

1. Oslo, Oslo (NO)
2. Akershus, Oslo (NO)
3. Stockholm, Stockholm (SE)
4. Hovedstaden, Copenhagen (DK)
5. Rogaland, Stavanger (NO)
6. Hamburg, Hamburg (DE)
7. Hordaland, Bergen (NO)
8. Sør-Trøndelag, Trondheim (NO)
9. Berlin, Berlin (DE)
10. Helsinki-Uusimaa, Helsinki (FI)
11. Uppsala, Uppsala (SE)
12. Põhja-Eesti, Tallinn (EE)
12. Västra Götaland, Göteborg (SE)
14. Vest-Agder, Kristiansand (NO)
15. Buskerud, Drammen (NO)
16. Troms, Tromsø (NO)
17. Midtjylland, Aarhus (DK)
18. Sankt-Petersburg, Sankt-Petersburg (RU)
19. Bremen, Bremen (DE)
20. Møre og Romsdal, Ålesund (NO)
21. Åland, Mariehamn (AX)
21. Vestfold, Tønsberg (NO)
23. Schleswig-Holstein, Kiel (DE)
24. Österbotten, Vasa (FI)
25. Mazowieckie, Warsaw (PL)

Source: Nordregio (2016)

BSR-RPI: DEMOGRAPHIC POTENTIAL

The results with regard to the demographic potential of regions again points to an advantage of the densely populated areas that attract population from other parts of the BSR. In Box B, regions that were not on the list of the 25 overall top-ranking regions are in italics, and there is a somewhat wider distribution of regions in this sphere with a total of ten regions not among the overall top-25. Also, the predominance of the north-western regions is somewhat diluted with a total of six regions (highlighted in the table in red) from the south-eastern part of BSR in the top-25.¹⁷

BSR-RPI: LABOUR FORCE POTENTIAL

The ranking on labour force potential differ significantly from overall BSR-RPI ranking and is the only ranking where the first position is taken by a South-eastern region, namely the Estonian region Põhja-Eesti incorporating the capital Tallinn and Harju county. In the list of top-25 performers we again note a significant presence of Norwegian regions (14 of 19), a strong presence of capital/regional capital regions (10 of 25; denoted with a star in Box C) and a general distribution that brings seven regions (italics) that were not on the top-25 in the overall BSR-RPI on to the listing.

There is again a stronger dominance of north-western regions, making up 39 of the top-46 spots in this ranking with only the six regions denoted in red joined by Kaunas from the south-eastern part of the BSR - making for a total of 7 among the top-46. Again, Norway stands out with 17 (of a total of 19, 89%) regions in the top two quintiles which is comparable to 5 of the 7 German regions (71%) whereas Sweden only has 8 of its 21 regions in this group. Noteworthy is that not one Polish region makes it into the top-25 nor the top-46 regions with regard to labour force potential.

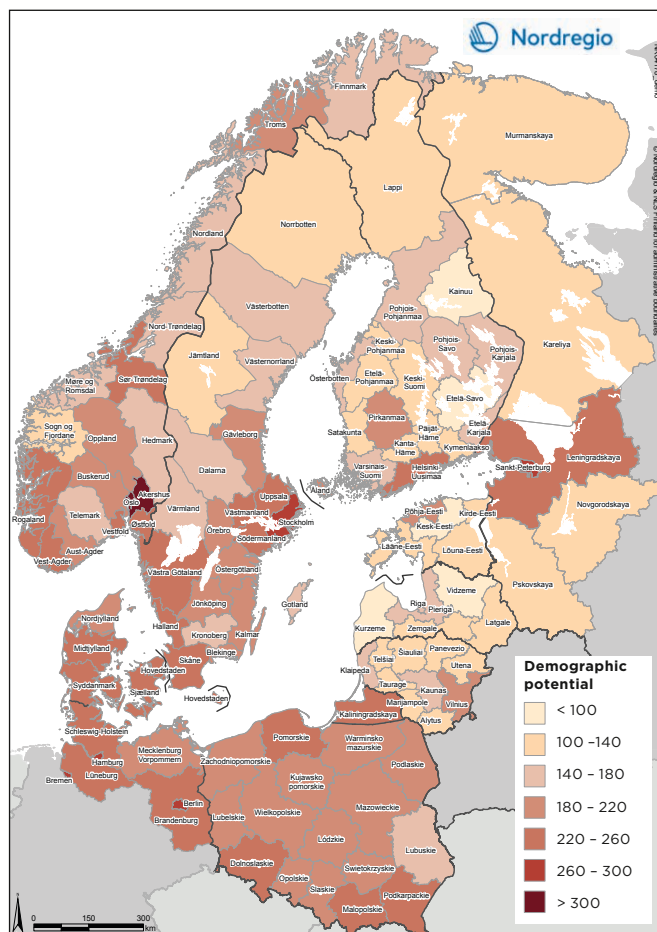
BSR-RPI: ECONOMIC POTENTIAL

Regarding the economic potential, the ranking again highlights the strong performance of the national/regional capitals (denoted with a star in Box d) with five of these regions in the top-5 and ten among the top-25. Recalling that the theme only includes two indicators (GRP/capita, 2/3; total R&D investments, 1/3) the strong dominance of the north-western regions is not a surprise. In fact, even looking at two top quintiles we only have the five national/regional capital regions out of the total of 44 regions in Poland, Russia, Estonia, Latvia among the top-46 performers; of which only Mazowieckie region (which includes Warsaw) in the highest quintile. In no other sub-theme is the east-west divide so obvious.

¹⁷ If looking at the comparable results in the top two quintiles we find a total of nine (out of 16) Polish, three (out of 7) Russian and one (out of 5) Estonian regions, making for a total of 13 south-eastern regions among the top-46. By comparison 10 out of 19 Norwegian regions and nine out of 21 Swedish are in the first two quintiles.

FIGURE 54

BRS REGIONAL POTENTIAL INDEX 2016: DEMOGRAPHICS CATEGORY SCORE BY REGION



Data source: National Statistical Institutes, Eurostat

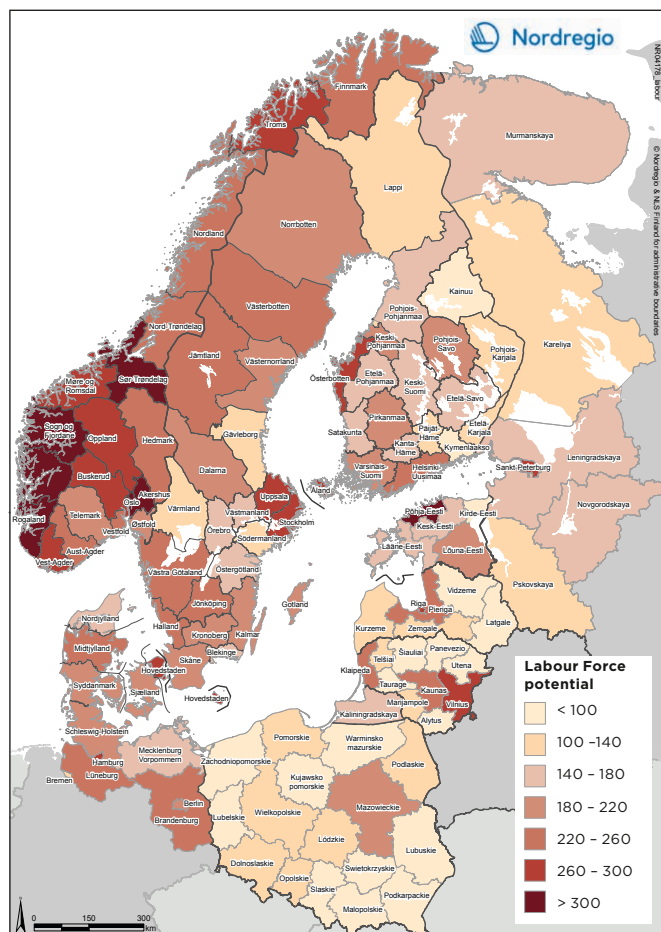
Box C. Demographic potential, top-25 ranking regions according to BSR-RPI w. affiliated urban area/country (overall rank within parenthesis); bold = south-eastern BSR; starred = national/regional capital as major affiliated urban area.

1. Oslo (1), Oslo (NO)*
2. Akershus (2), Oslo (NO)*
3. Berlin (9), Berlin (DE)*
4. Stockholm (3), Stockholm (SE)*
- 5. Sankt-Petersburg (18), Sankt-Petersburg (RU)***
6. Bremen (19), Bremen (DE)*
7. Hamburg (6), Hamburg (DE)*
8. Hovedstaden (4), Copenhagen (DK)*
8. Västra Götaland (13), Göteborg (SE)
10. Østfold (46), Fredrikstad (NO)
11. Helsinki-Uusimaa (10), Helsinki (DK)*
11. Vest-Agder (14), Kristiansand (NO)
11. Midtjylland (17), Aarhus (DK)
11. Vestfold (21), Tønsberg (NO)
16. Rogaland (5), Stavanger (NO)
- 16. Leningradskaya (59), Gatchina (RU)**
17. Skåne (29), Malmö (SE)
17. Halland (30), Halmstad (SE)
19. Hordaland (7), Bergen (NO)
19. Uppsala (11), Uppsala (SE)
19. Schleswig-Holstein (23), Kiel (DE)*
19. Lüneburg (35), Lüneburg (DE)
19. Västmanland (44), Västerås (SE)
24. Sør-Trøndelag (8), Trondheim (NO)
24. Södermanland (58), Eskilstuna (SE)
- 24. Dolnośląskie (63), Wrocław (PL)**
- 24. Małopolskie (73), Kraków (PL)**
- 24. Podkarpackie (94), Rzeszów (PL)**
- 25. Kaliningradskaya (71), Kaliningrad (RU)***

Source: Nordregio (2016)

FIGURE 55

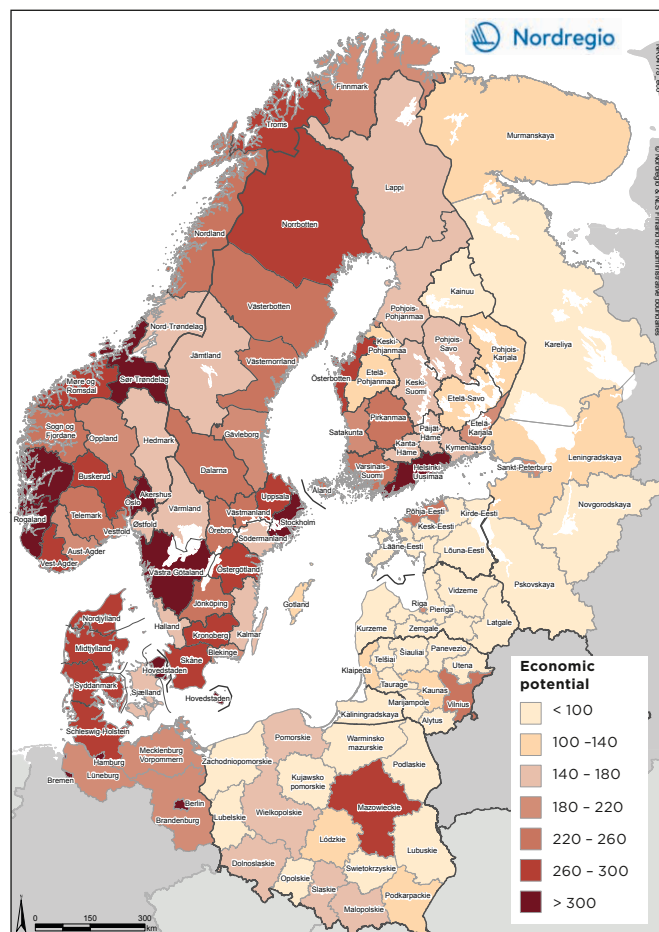
BRS REGIONAL POTENTIAL INDEX 2016: LABOUR FORCE CATEGORY SCORE BY REGION



Data source: National Statistical Institutes, Eurostat, Nordregio estimates

FIGURE 56

BRS REGIONAL POTENTIAL INDEX 2016 ECONOMIC POTENTIAL BY REGION



Data source: National Statistical Institutes, Eurostat, SSB/FoU-statistikk, NIFU, Nordregio estimates

Box B. Labour force potential, top-25 ranking regions according to BSR-RPI w. affiliated urban area/country (overall rank within parenthesis); bold = south-eastern BSR; starred = national/regional capital as major affiliated urban area.

1. Põhja-Eesti (12), Tallinn (EE)*
2. Akershus (2), Oslo (NO)*
3. Sogn og Fjordane (28), Førde (NO)
4. Oslo (1), Oslo (NO)*
5. Rogaland (5), Stavanger (NO)
6. Hordaland (7), Bergen (NO)
6. Sør-Trøndelag (8), Trondheim (NO)
8. Hovedstaden (4), Copenhagen (DK)*
8. Troms (16), Tromsø (NO)
10. Åland (21), Mariehamn (FI)*
10. Österbotten (24), Vasa (FI)
10. Vest-Agder (14), Kristiansand (NO)
10. Møre og Romsdal (20), Ålesund (NO)
14. Buskerud (15), Drammen (NO)
- 14. Sankt-Petersburg (18), Sankt-Petersburg (RU)***
14. Uppsala (11), Uppsala (SE)
- 17. Vilnius (27), Vilnius (LT)***
18. Hamburg (6), Hamburg (DE)*
- 18. Riga (37), Riga (LV)***
18. Oppland (38), Gjøvik (NO)
18. Stockholm (3), Stockholm (SE)*
- 22. Klaipėda (61), Klaipėda (LT)**
23. Halland (30), Halmstad (SE)
24. Nord-Trøndelag (51), Steinkjer (NO)
25. Vestfold (21), Tønsberg (NO)
25. Aust-Agder (38), Arendal (NO)

Source: Nordregio (2016)

Box D. Economic potential, top-25 ranking regions according to BSR-RPI w. affiliated urban area/country (overall rank within parenthesis); bold = south-eastern BSR; starred = national/regional capital as major affiliated urban area.

1. Stockholm (3), Stockholm (SE)*
2. Hamburg (6), Hamburg (DE)*
3. Hovedstaden (4), Copenhagen (DK)*
4. Oslo (1), Oslo (NO)*
5. Helsinki-Uusimaa (10), Helsinki (FI)*
6. Bremen (19), Bremen (DE)*
7. Rogaland (5), Stavanger (NO)
8. Berlin (9), Berlin (DE)*
9. Hordaland (7), Bergen (NO)
9. Sør-Trøndelag (8), Trondheim (NO)
9. Västra Götaland (13), Göteborg (SE)
12. Akershus (2), Oslo (NO)*
13. Uppsala (11), Uppsala (SE)
- 14. Mazowieckie (25), Warsaw (PL)***
15. Troms (16), Tromsø (NO)
15. Møre og Romsdal (20), Ålesund (NO)
15. Buskerud (15), Drammen (NO)
15. Midtjylland (17), Aarhus (DK)
15. Syddanmark (26), Odense (DK)
20. Norrbotten (50), Luleå (SE)
21. Nordjylland (32), Aalborg (DK)
21. Kronoberg (31), Växjö (SE)
21. Östergötland (33), Linköping (SE)
24. Schleswig-Holstein (23), Kiel (DE)*
24. Skåne (29), Malmö (SE)
25. Österbotten (24), Vasa (FI)
25. Vest-Agder (14), Kristiansand (NO)

Source: Nordregio (2016)



CONCLUSIONS

THE BALTIC SEA REGION IN 2017

The Baltic Sea Region economy is firing on all cylinders; this is the clear impression from the review of the current macroeconomic conditions in part A of this year's State of the Region Report. This is even more impressive given the significant risks that were seen only a year ago, when a number of political shocks had hit. On the back of this strong current climate, prosperity dynamics are healthy. Prosperity growth is strong across the Region, and the catch-up of the less prosperous south-eastern part continues.

However, it remains to be the case that growth dynamics, especially productivity growth, are markedly down since the crisis. And while the most recent data is encouraging, it is hard to interpret the evidence as a return to the pre-crisis conditions. As a result, also the speed of catch-up within the Region has become much slower. This is a real concern given the large differences in prosperity levels that continue to characterize the Region.

As this year's State of the Region Report finds, the dynamics are even more heterogeneous at the subnational level, with especially rural regions struggling. Overall the BSR, particularly its more advanced North-western part, does better on providing opportunities also for these regions than many other advanced economies. But, within-country differences, and the growing dominance of a modest number of large metropolitan areas, is clearly an issue to be aware of, especially given the low average density across the Region.

Competitiveness fundamentals across the Region continue to be strong. Where issues exist, for example in translating research capacity into economic activity, they have been present for some time. The post-crisis slow-down in productivity and catch-up is thus likely to be driven by more structural changes affecting economies globally than by choices made within the Baltic Sea Region. But even if that is the case, countries across the Baltic Sea Region will still need to find a local and regional answer to these global challenges.

LOOKING AHEAD: WHAT ROLE FOR THE REGION, AND FOR REGIONAL COLLABORATION?

Collaboration across the Baltic Sea Region is a tremendous success story. It is happily recited in the speeches given by leading politicians across the Region. And it leaves many other macro-regions in Europe and elsewhere impressed, especially if they have themselves learned how hard this type of cross-border collaboration is.

Baltic Sea Region collaboration has achieved many of the objectives that it set out to tackle, particularly with regards to removing the boundaries that had kept the Region apart before 1990. Poland and the three Baltic countries are core members of the EU, and fully integrated economically as well as politically. The relations with Russia remain complex, and especially on security issues they are sadly more acrimonious than in the past. But this is also nothing that originates in the Baltic Sea Region or can be resolved at this level, even if much of it plays out in this Region. With the EU Strategy for the Baltic Sea Region a robust framework for collaboration among the EU members of the Region has been developed. It focuses in its action priorities on key issues that regions and countries around the Baltic Sea are now facing, from prosperity to the environment to connectivity.

The question is what role the Region has for the broader challenges that exist, especially those that require political decisions at the national level. Can it be a platform for introducing common views on the future of the EU into the White Paper process that EU President Juncker has started earlier this year? Can the Region even make a contribution to the global discussion on the future of the international trading system? The BDF Summit in Berlin in June 2017 discussed these issues, based on another BDF Report.¹⁸ The emerging response seemed to be that while the Region can play this role to some degree, it is not really doing so at the moment. Instead, it plows ahead with the operational tasks under existing collaboration structures, especially the EU Strategy for the Baltic Sea Region.

In our view, this is a missed opportunity. The Baltic Sea Region has a unique perspective to offer, and its heterogeneity makes its voice in many respects even more important. And for many countries in the Region working together provides the best hope to be a part of the discussion rather than a mere recipient of the decisions made by others. If the Region wants to embark on such a path, launching Baltic Sea Region 2.0, it will require a clear decision that leaders across the Region are ready to drive this process. It will not be easy. But it has real promise, and it can build on the strong foundations created across the Region over the last three decades.

¹⁸ Christian Ketels, David Skilling (2017), *The Future of Europe and Globalization: Where is the Voice of the Baltic Sea Region?*, Baltic Development Forum/Tillväxtverket: Copenhagen/Stockholm.

APPENDIX

Real GDP growth, % y/y

	2012	2013	2014	2015	2016E	2017E	2018E
Baltic Sea Region	0.9	1.0	1.5	2.1	2.0	2.7	2.3
Denmark	0.2	0.9	1.7	1.6	1.7	2.2	2.0
Estonia	4.3	1.4	2.8	1.4	1.6	3.3	2.9
Finland	-1.4	-0.8	-0.6	0.0	1.9	3.0	2.0
Germany	0.9	1.2	1.0	1.5	1.9	2.1	1.8
Iceland	1.2	4.4	1.9	4.1	7.2	4.4	2.8
Latvia	4.0	2.6	2.1	2.7	2.0	4.0	3.8
Lithuania	3.8	3.5	3.5	1.8	2.3	3.8	3.5
Norway	2.7	1.0	1.9	1.4	1.0	1.9	2.6
Poland	2.4	0.6	3.0	3.9	2.7	3.9	3.4
Russia	1.5	2.4	-2.1	-2.8	-0.2	1.6	1.4
Sweden	-0.3	1.2	2.6	3.8	2.9	3.3	2.6

Source: Nordea Markets

Real Government consumption growth, % y/y

	2012	2013	2014	2015	2016E	2017E	2018E
Baltic Sea Region	1.1	1.0	1.3	1.9	2.2	1.3	1.5
Denmark	0.8	-0.1	1.2	0.6	0.4	1.0	0.5
Estonia	3.2	1.9	2.7	3.4	1.0	1.8	2.3
Finland	0.5	1.1	-0.5	0.0	1.2	0.3	0.4
Germany	1.1	1.2	1.2	2.9	3.7	1.5	1.3
Iceland	-1.8	1.0	1.7	1.0	1.5	1.2	1.3
Latvia	0.3	1.6	2.1	3.1	2.7	3.2	2.6
Lithuania	1.2	0.7	0.3	0.9	1.6	1.6	2.0
Norway	1.6	1.0	2.7	2.4	2.1	1.9	1.8
Poland	-0.3	2.5	4.1	2.4	2.8	2.8	2.8
Russia	2.5	1.4	-2.1	-3.1	-0.5	0.5	0.6
Sweden	1.1	1.3	1.5	2.4	3.4	0.0	1.2

Source: Nordea Markets

Real Private consumption growth, % y/y

	2012	2013	2014	2015	2016E	2017E	2018E
Baltic Sea Region	1.8	1.6	1.6	2.1	2.0	2.4	2.2
Denmark	0.5	0.3	0.5	1.9	2.1	2.3	2.1
Estonia	4.3	3.8	3.3	4.7	4.3	2.0	4.1
Finland	0.3	-0.5	0.8	1.7	1.8	1.5	1.3
Germany	1.3	0.7	0.9	1.6	1.9	2.0	1.6
Iceland	2.0	1.0	2.9	4.3	6.9	5.9	4.3
Latvia	3.1	5.0	1.3	3.5	3.4	4.5	4.0
Lithuania	3.1	4.3	4.3	4.1	5.6	3.8	3.2
Norway	3.5	2.7	1.9	2.6	1.5	2.5	2.4
Poland	0.7	0.3	2.4	3.0	3.8	3.9	3.1
Russia	7.4	4.4	2.0	-9.8	-4.5	2.5	2.3
Sweden	0.8	1.9	2.1	3.1	2.2	2.5	2.3

Source: Nordea Markets

Real Investment growth, % y/y

	2012	2013	2014	2015	2016E	2017E	2018E
Baltic Sea Region	2.5	1.0	1.9	0.6	3.3	5.6	3.6
Denmark	3.7	2.7	3.5	2.5	5.6	2.3	3.2
Estonia	12.7	-2.8	-8.1	-3.4	-2.8	10.0	2.6
Finland	-1.9	-4.9	-2.6	0.7	7.2	8.4	3.2
Germany	-0.7	-1.1	3.4	1.0	2.9	4.1	3.2
Iceland	5.3	2.2	16.0	17.8	22.7	13.6	6.4
Latvia	14.4	-6.0	0.1	-1.8	-11.7	14.0	4.6
Lithuania	-1.8	8.3	3.7	4.7	-0.5	9.0	4.4
Norway	7.6	6.3	-0.7	-4.0	-0.2	3.2	3.2
Poland	-1.8	-1.1	10.0	6.1	-7.9	4.9	6.1
Russia	3.9	-6.8	-5.7	-9.9	-1.8	4.0	2.6
Sweden	-0.2	0.6	5.5	6.9	5.6	8.1	4.2

Source: Nordea Markets

Real Export growth, % y/y

	2012	2013	2014	2015	2016E	2017E	2018E
Baltic Sea Region	2.1	0.9	3.4	3.8	2.4	4.2	3.7
Denmark	1.2	1.6	3.6	1.8	2.5	4.5	3.7
Estonia	4.8	2.3	3.1	-0.6	4.0	5.9	2.9
Finland	1.2	1.1	-2.7	0.8	1.3	7.7	2.9
Germany	2.8	1.9	4.1	4.7	2.4	4.0	3.1
Iceland	3.6	6.7	3.2	9.2	11.1	5.7	4.4
Latvia	9.8	1.1	3.9	2.6	2.8	5.4	4.0
Lithuania	12.2	9.6	3.5	-0.4	3.5	6.0	4.5
Norway	1.4	-1.7	3.1	4.7	-1.8	1.7	2.2
Poland	4.6	6.1	6.7	7.7	9.0	7.7	6.6
Russia	1.4	4.6	0.6	3.7	3.1	5.0	2.0
Sweden	1.0	-0.8	5.3	5.7	3.3	3.5	5.0

Source: Nordea Markets

Real Import growth, % y/y

	2012	2013	2014	2015	2016E	2017E	2018E
Baltic Sea Region	2.2	2.1	3.5	2.9	3.8	4.5	3.8
Denmark	2.7	1.5	3.6	1.3	3.5	4.2	3.9
Estonia	9.7	3.2	2.2	-1.4	5.3	6.6	3.4
Finland	1.6	0.5	-1.3	3.2	4.4	5.3	2.1
Germany	-0.1	3.1	4.0	5.2	3.8	4.7	3.6
Iceland	4.6	0.1	9.8	13.5	14.7	10.3	7.8
Latvia	5.4	-0.2	0.5	2.1	4.6	6.2	4.5
Lithuania	6.6	9.3	3.3	6.2	3.9	6.8	4.0
Norway	3.1	4.9	2.4	1.6	2.3	3.5	2.1
Poland	-0.3	1.7	10.0	6.6	8.9	8.5	7.4
Russia	9.7	3.9	-7.1	-25.8	-3.8	15.0	8.0
Sweden	0.5	-0.1	6.3	5.2	3.4	4.6	4.1

Source: Nordea Markets

ABOUT THE AUTHORS

DR. CHRISTIAN KETELS

Dr. Christian Ketels is a member of the Harvard Business School faculty where he leads Prof. Michael E. Porter's research team. He is also a Senior Research Fellow at the Stockholm School of Economics and President of TCI, the global network for cluster-based economic development. He has advised a wide range of governments, research institutions, and international organisations on strategy and growth. Dr. Ketels is a member of the BDF Advisory Board and the lead author on the State of the Region Report.

HELGE J. PEDERSEN

Helge J. Pedersen has been Group Chief Economist with Nordea since 1999. He has taught economics at the University of Copenhagen and Copenhagen Business School, and has written textbooks and numerous economic articles on the Danish and international economy. He is one of the most cited Danish economists. Helge is chairman of the Chief Economist Group under the European Banking Federation, a member of the advisory board for the independent Danish think tank KRAKA and a member of The US based National Association for Business Economics. Helge was also a longstanding member of the Conference Board where he served as chairman for the European Economic council 2006-2008.

DR. MIKAEL OLSSON

Dr. Mikael Olsson is a social scientist that for some 25 years has worked extensively and in various capacities with issues relating to the societal transformations in the former Eastern Europe and in the current Baltic Sea Region. He has mixed academic work with more policy oriented work in government administration; he has held positions with Uppsala University, the Stockholm School of Economics (SITE), the National Institute for Working Life, Sida Baltic Sea Unit and the Swedish Institute. He currently is affiliated with Södertörn University & Uppsala University but also operates his own consultancy (Skarp Produktion AB). He is the co-author of the two sections dealing with competitiveness in this year's State of the Region Report.

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Contact:	Baltic Development Forum Nytorv 3, 1st Floor DK-1450 Copenhagen K, Denmark Phone: +45 70 20 93 94 Fax: +45 70 20 93 95 Email: bdf@bdforum.org
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