STATE OF THE REGION REPORT™

2011

The Top of Europe's Quest for Resilience: A Competitive Region Facing a Fragile Global Economy

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sustainable growth · innovation · competitiveness

Key messages

- A sound policy response has helped the Baltic Sea Region to weather the global economic crisis better than most of its peers.
- The Region's post-crisis recovery has been surprisingly rapid, but turbulences in the Euro zone and elsewhere have severely undermined the economic outlook
- Longer-term, the Region also needs a strategy to retain value creation locally as FDI is increasingly surpassing trade as a key mechanism for internationalization
- The competitiveness of the Region remains solid and broadly in line with prosperity; sustained new growth requires further continuous competitiveness upgrading
- Regional collaboration is a critical tool for competitiveness upgrading, especially in areas like market and innovation system integration. Joint policy learning but also traditional support to lagging countries continues to hold benefits for the Region
- Regional collaboration around the Baltic Sea has benefited from increasing levels of coordination across organizations, networks, projects, and financing.
- The EU Baltic Sea Region strategy has played a very positive role in enhancing the effectiveness of collaboration. It has so far been less impactful in introducing new participants, topics, or solutions to address regional issues
- Strong political leadership from within the Region is needed to provide the EU strategy with the financial and organizational architecture needed for another step-change in impact
- Entrepreneurship through indigenous innovation and firm entry is critical for the less developed parts of the Baltic Sea Region to accelerate catch-up and for its already wealthy economies to sustain their strong global position

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Foreword

You can earn from having good relations with your neighbouring countries, but positive neighbourhood effects on a country's economy do not come automatically – they have to be earned.

This motto has become emblematic to the State of the Region Report because it captures in short the purpose of the report and its analytical approach. It's about benchmarking the countries' competitiveness and collaborating in such a way that it leaves all the neighbours in the region better off, in a win-win situation.

Surely the economic framework conditions are primarily defined domestically and internationally. The economic and financial crisis that hit the Baltic Sea Region particularly hard has provided sufficient illustration of the effects of globalisation. The region is still in the aftermath of the economic crisis and the future continues to be uncertain, although the Baltic Sea Region is "solid" as Christian Ketels rightly puts it.

At the same time, the influence of close neighbours in European sub-regions - or in macro-regions - is extremely important - and often underestimated. In an open economy, one country's competitiveness performance and policy choice influences the other.

The Nordic countries have a long tradition for making win-win neighbourhood work, and the same theme is now increasingly being brought up in the Baltic Sea Region context, not least thanks to the EU Strategy for the Baltic Sea Region. Since its first publication eight years ago, it's been the role of the State of the Region report to contribute to this debate.

What is unique in the Baltic Sea Region today is the new possibility to combine European and regional integration processes in a structured manner – through the new macro-regional approach. The concept is being evaluated during the Baltic Development Forum Summit in Gdansk 24-26 October together with the Annual Forum of the EU strategy.

The sponsors – Baltic Development Forum, Nordic Council of Ministers and European Investment Bank – trust that the State of the Region Report will provide a clearer economic context and framework for the Baltic Sea macro-region and that the report will assist in bringing the concept of competitiveness to the heart of the discussions.

As always, we would like to thank Christian Ketels for his substantial work. Likewise, we would to thank the economists who have contributed to this year's report.

As convincing as Christian Ketels's analysis may seem, it must be stated that the views of the report do not necessary reflect the view of the sponsors.

We wish you a good read and fruitful discussions!

Copenhagen/Gdansk

October 2011

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Executive Summary

The 2011 State of the Region Report, the eighth in this series of annual evaluations of competitiveness and cooperation across the Baltic Sea Region, reviews how the Region has emerged from the global economic crisis and assesses the new challenges it is now facing. The last two years have been a formidable rollercoaster, from a deep contraction when the crisis hit, to a vigorous recovery as the policy response and renewed global demand were starting to show, to now renewed concerns about the outlook for the global economy.

Part A of the Report tracks different indicators of competitiveness in the Region, much as in previous Reports. The Report includes new data, including for the first time more detail on the policy actions taken by countries across the Region. There is also a special section dedicated to Poland, written by Ryszard Petru, Chief Economic Advisor of Warsaw-based DemosEUROPA, and his colleague Ignacy Święcicki. Part B focuses on collaboration across the Region. It covers the activities of main cross-regional institutions and networks, as well as the activities of international financial institutions in the Region. It also discusses the progress of the EU Baltic Sea Region strategy process, focusing specifically on three of the strategy's Flagship projects. Part C is an invited contribution by Pontus Braunerhjelm and Gunnar Eliasson on entrepreneurship in the Baltic Sea Region.

Competitiveness in the Baltic Sea Region

The Baltic Sea Region has come through the crisis better than most of its peers. The collapse of world trade as well as the uncertainties on financial markets left their mark. But the economies proved to be flexible, and governments effective in implementing robust measures to support a relatively quick return to growth.

In the short- to medium-term, the main challenge is the renewed uncertainty about the global economic outlook. With less policy tools left in the arsenal to address the low level of demand in Europe and North America, it is likely that the most important trading partners of the Baltic Sea Region are facing an extended period of slow growth. In the medium- to long-term, the Baltic Sea Region is also facing structural shifts in the global economy. Internationalization is becoming more investment- and less trade-driven. This creates challenges for a traditionally export-oriented Region with highly international companies and a small home base. Already now the innovation data suggests an imbalance between what the Region offers and what it gets.

What does this imply for collaboration across the Baltic Sea Region? First, there are a number of competitiveness issues where regional collaboration is essential for making meaningful progress. The prime example is further market integration to overcome the relatively low level of domestic market rivalry. Market integration is a question of fully integrating market structures so that companies can operate across national boundaries without loss of efficiency. Another is cluster development. Allowing and encouraging cluster specialization to occur across the Region would enhance the opportunities for more clusters to emerge and that can compete at the European and global level.

The second area includes activities where policy action needs to be taken at the national level, but where challenges across the Region are similar. Joint learning and experimentation can lead to the design of better policies than any national process could deliver. There is a wide range of policy areas in which such benefits exist, from cluster and innovation policy to education, to macroeconomic management and financial regulation.

Finally, there is a third group of issues where individual countries in the Region can benefit just from drawing on the experience of more advanced partners in the Region. This has happened in a lot of cases over the last two decades, especially between the Nordic and the Baltic countries. There remains potential in this type of collaboration, for example to strengthen the quality of public administration and institutions in the Baltic countries. Better performance by them would help the entire Region, not least the Nordics.

Collaboration across the Baltic Sea Region

The Baltic Sea Region benefits from a rich set of linkages and activities. Over the years, the level of coordination across these efforts has visibly increased. The EU Baltic Sea Region strategy has played an important role in providing orientation and a structure within which individual projects can be anchored in a broader context. International financial institutions (IFI) actively support these efforts across the Region. For them, too, the EU Baltic Sea Region strategy has been an important reference point. It allowed them to focus on key issues in the Region and be part of a broader action agenda of complementary initiatives.

The most visible positive impact of the EU Baltic Sea Region strategy has been on coordination across activities and, especially for InterReg funds and IFI lending, on financing priorities. The activities launched under the umbrella of the strategy even proved to be open for effective collaboration with non-EU members in the Region. In many ways, what has been achieved is much better than what could have been expected a few years ago.

While the strategy encouraged better collaboration among existing partners on established policy issues, it was not equally effective in providing new solutions or engaging new groups. And while it is early days, it is not clear whether the plans developed within the context of the strategy and its flagship projects will trigger the necessary investments and policy changes at the national level to achieve real impact. These limitations of the strategy are largely the result of the structural decisions made at the outset. The lack of an institutional structure and a clear financial framework made the level of ambition in implementing the strategy's action agenda highly dependent on the support from political leaders. With their attention now captured by the global crisis and its aftermath, there is not enough political pressure to push the boundaries of regional collaboration. Within governments, this limits the impact the strategy can have on policy areas and agencies beyond the traditional core of regional actors. Outside of governments, it provides little impetus to mobilize private sector participants to engage.

Collaboration across the Baltic Sea Region is already an asset for regional competitiveness. And the EU Baltic Sea Region has had an important impact on increasing the effectiveness of collaboration. But another step change in impact will only be reached if some of the current decisions on the collaboration approach are reviewed:

- Strengthening the institutional architecture for collaboration, for example through a public-private BSR competitiveness council, is possible without creating a new bureaucracy. It would enhance the level of impact that can be achieved without having torrely on constant high-level politicalnengagement.
- Increasing the flexibility of financial instruments, for example by further opening up national structural funds for regional use and by pooling more resources in cross-regional funds, is possible without new money or a new macroregional budget lint. It wouldnenhance impact and provide more stability for regional efforts.

Collaboration in the Baltic Sea Region is ultimately collaboration among sovereign nation states and subnational regions, even when it happens under the umbrella of the EU strategy. Progress is thus dependent on the willingness of national governments to enhance collaboration. They can do so through strengthening the institutional architecture and the flexibility of financial instruments as discussed above. They can launch new initiatives such as the creation of an annual Baltic Sea Region reform program in the context of the Europe 2020 Strategy. And they – as the Swedish government has done – can actively push their ministries and agencies to pursue regional efforts as part of national policies. While the Baltic Sea Region strategy is an EU effort by name, its future and success lies in the Region, not in Brussels.

The role of entrepreneurship in the Baltic Sea Region

Entrepreneurship has been a critical element in closing the still significant gaps in per capita income across the countries of the Baltic Sea Region. New firm formation is always slow to manifest itself in macroeconomic aggregates. It is

a process that takes decades rather than years to show its full impact. Among the many firms started, only some survive and very few become large businesses. In transition economies, survival rates and growth trajectories tend to be even lower. Less developed financial markets fail to provide the necessary tools to support SME growth, in particular the commercialization of new innovative technologies. In addition, the absence of deep local markets for specialized subcontracting services hinders the restructuring of incumbent businesses.

Fast progress in catch up based on entrepreneurship has in many transition economies, including those in the Baltic Sea Region, initially been driven by foreign direct investment, often involving the reorganization of Soviet-type manufacturing groups by new foreign owners. This process enabled the infusion of critical new western technology and the shedding of redundant staff. Progress has, however, been uneven depending on the readiness of local policy makers to pursue the necessary institutional reforms, and their willingness to accommodate the social disruptions that followed. Progress on this agenda has slowed during the recent recession years. While the potential for vigorous entrepreneurial catch up through FDI and new firm formation has been there, policy makers have not done enough to encourage and facilitate the spontaneous capturing of the business opportunities. The most successful economies have been those that acted most decisively on institutional reforms and other steps to accommodate the necessary structural and social change. Geographically proximity to advanced economies has also been a positive factor.

FDI -driven entrepreneurial change still has an important role to play in all transition economies in the Baltic Sea Region. But future catch up will increasingly depend on growth contributions from new businesses, many of which must already have been established.

Looking into an uncertain future

After a year of strong economic growth in most parts of the Baltic Sea Region, the future looks yet again challenging:

- The Region is facing a rapidly deteriorating economic environment, with flagging global demand and tightening financial market conditions. Continued uncertainty about the European sovereign debt crisis and the future of the Euro will only make matters worse. And, within the countries of the Region, there is much less room for a forceful monetary and fiscal policy response now then there was two years ago.
- The Region is combining the ambition of creating an increasingly integrated economy with a broad range of monetary policy arrangements and significant volatility in exchange rate relations. Whether this mix is sustainable is questionable, but there is also no easy alternative: While some parts of the Region still want to join the Euro-Zone, in others the already limited interest in doing so has waned further over the last year.
- The Region has to deal with changes in the structure of the global economy, spurred by slow growth in Europe and a growing role of FDI as a tool to serve foreign markets. Competitiveness remains critical, but the specific action priorities to succeed in such an environment need to be reviewed.

All of these challenges are complex, and there is no simple solution available for either of them. The Baltic Sea Region is well advised to pursue the approach of gradual change combined with a commitment to key policy principles that have served the Region well over the last twenty years: Macroeconomic stability as a credible policy orientation, not just a legal commitment, and perpetual competitiveness upgrading instead of easy money as a growth driver.

But this will not be enough to meet the challenges ahead. A step change in collaboration would enable much more rapid progress on competitiveness upgrading. To get there, the structures need to be right. The EU Baltic Sea Region strategy has already provided clear benefits for regional collaboration. It can become even more effective, if the self-imposed restrictions on institutional and financial architecture are removed. Neither new institutions nor new money are critical. But in both areas a revision of the current structures could significantly benefit the Region.

Introduction

Three years ago the bankruptcy of Lehman Brothers became the symbol of the deep crisis hitting the global economy. What started as a crisis in the private financial system has in the meantime become a crisis of confidence in the solidity of public finances in the US and Europe. While the short-term activities taken in response to the first round of the crisis worked better than expected, it now appears that the long-term repercussions that the crisis will have are much deeper than initially realized. It could easily take a decade for the US and Europe to get back to their full economic potential, now held back by severe macroeconomic imbalances as the result of fiscal policy paths that the markets perceive as unsustainable. In the US, the challenge is a political system that has proven incapable to make the necessary choices. In Europe, politicians have repeatedly announced new measuret. But so far none of them has proven effective in calming market fears.

The Baltic Sea Region is somewhere between a role model and an appendix in this global context. It entered the global crisis with a much more solid economic balance sheet than many of its peers. Its governments reacted to the crisis in a forceful and effective way. And it is now overall in a relatively enviable economic situation, even though the crisis has left its scars. But while the performance of the immediate past looks and is impressive, the future will be challenging. In the short-run, the renewed uncertainties about the recovery of the global economy are certain to hit the export-oriented economies of the Region. But the deeper questions concern the longer-term. The Region needs to find its role within and towards a European Union that is itself still looking for a new, more stable structure. On this path there are many questions, but few, if any, answers. Can the Baltic Sea Region further increase its level of integration while it is home to nine currencies? Can the Baltic Sea Region remain a European role model for collaboration on microeconomic issues like innovation and infrastructure through the EU Baltic Sea Region Strategy, while the individual countries in the region take highly heterogeneous positions towards the EU's fiscal and monetary policy structures? Are the mechanisms for decision making and joint action in the Baltic Sea Region sufficient to meet the current challenges, or do they need to change?

The 2011 State of the Region Report, the eighth in this series, continues to provide a data-rich foundation for decision makers across the Region to ponder these questions. Its ambition is to provide facts, a framework for analysis, and commentary that suggests implications. Its ambition is not to deliver answers or recommendations. The Report is also a window into the Region, for companies or investors considering to do business here, and for politicians and government officials that want to learn from its experience. It aims to provide a balanced perspective on strengths and weaknesses of the "Top of Europe", not to be a marketing tool.

What is the Baltic Sea Region? For our analysis, we define the Baltic Sea Region – as in previous years – to include 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).

This Region is home to 57.4 million people, another reduction of 50,000 compared to last year. The Nordic countries — together representing slightly less than 45% of the Region's inhabitants — have continued to gain population at a rate of 50,000 annually. But the decrease elsewhere, especially in north-western Russia (roughly 60,000) and the Baltics (roughly 30,000), was even higher. The Region's labor force of 27.4 million employees in 2010 has been falling by another 90,000 after the dramatic drop of 740,000 in 2009, breaking the positive trend of the last decade. Despite the fall in population and the economic crisis, the Region still registers 1.2 million more employees today than a decade ago. But the days of GDP growth by pure expansion of the labor force are over. The Region created an annual GDP (PPP adjusted) of slightly above €1,300 billion ($1,820 billion). This is similar to about 11% of the EU-27 economy, roughly the size of the Italian economy. The Nordic countries account for 62% of the total (7% less when including only the Norwegian mainland economy). Northern Germany and Northwestern Russia account for roughly 13% each. The Baltics contribute close to 6.5% and Northern Poland the remaining 5%. Overall, the crisis has shifted the Region's economic balance further towards the Nordic countries.

The Baltic Sea Region thus defined overlaps with a number of administrative groupings: The Council of Baltic Sea States matches most closely the Region, but has as an intergovernmental structure of nations no official limitation on the relevant sub-regions of Germany, Poland, and Russia. The Nordic countries have a long-standing collaboration with an institutional base in the Nordic Council and the Nordic Council of Ministers. In a number of areas, the three Baltic countries, which have created some similar structures among themselves, have become an official part of this collaboration. To the north, the Barents Euro-Arctic Council (BEAC) includes a platform for Norway, Sweden, Finland, and NW Russia to collaborate. The Arctic Council stretches out even more, including Denmark (Greenland) and Iceland from the Baltic Sea Region as well as Canada and the US in addition to the countries represented in the BEAC.

There is no scientific way to exactly determine the boundaries of the Baltic Sea Region. We proceed conservatively, including only those regions that appear closely integrated with other regions around the Baltic Sea. Iceland and Norway are included, because they have close relations to many countries around the Baltic Sea and are eager to participate in regional cooperation. Most regions in Germany, Poland, and Russia further away from the Baltic Sea are not included, because their economic ties with the Baltic Sea Region are limited. This makes the definition used here more restrictive than the ones used by other institutions. For comparisons, the Report looks – depending on data availability - at the EU-15 (old member countries), the EU-8 (new central European member countries, excluding Bulgaria and Romania), regions within Europe (Iberian Peninsula (Spain, Portugal), British Isles (UK, Ireland)), NAFTA (US, Canada, and Mexico), Oceania (Australia, New Zealand), the Asian Tigers (Hong Kong, Singapore, Taiwan, and South Korea), and occasionally the OECD. Where possible, the Danube Region – stretching from southern Germany to the Black Sea – has been included in the comparisons as well. The European Commission is working with partners in this region to develop an EU Danube Region Strategy building on the experience in the Baltic Sea Region.

The structure of the State of the Region Report

Broadly following the structure developed since 2004, **section A** provides a discussion of the recent trends in competitiveness across the Baltic Sea Region since May 2010. The first part looks at the current economic climate in the Region. The second part provides competitiveness diagnostics, covering data on economic outcomes, intermediate indicators, and competitiveness fundamentals. This part will also include a discussion of main policy efforts across the Region that aim to upgrade competitiveness. Ryszard Petru, Chief Economic Advisor of Warsaw-based DemosEUROPA, and one his colleagues discuss Poland's current situation in a special contribution.

Section B gives an update on the profile of collaboration across the Baltic Sea Region. The first part tracks the activities of the main regional organizations and projects over the last year. The second part highlights the role of international financial institutions in the region, in particular the EIB, the EIF, the NIB, and the EBRD. The final part then looks at the progress made in implementing the EU Baltic Sea Region strategy. It discusses some of the strategy's key projects as well as the overall experience with the strategy's implementation so far.

Section C looks at a particular dimension of the Baltic Sea Region economy, the state of entrepreneurship and of small- and medium-size enterprises (SMEs) across the Region. Previous State of the Region Reports have repeatedly identified the lack of new high-growth companies as one of the central challenges of the Baltic Sea Region. Professors Pontus Braunerhjelm and Gunnar Eliasson, two renowned experts in the area of entrepreneurship and SMEs, have collected the existing data and knowledge about the state of entrepreneurship and SMEs in the Baltic Sea Region.

The Report closes with some overall reflections on the current state of the Baltic Sea Region. The Baltic Sea Region has in many ways performed remarkably well during the crisis. The Region has in some parts been able to reap the benefits of solid policies pursued even before the crisis hit. In others it has shown impressive resolve in dealing with adversity and implementing painful policies when needed. These achievements should give the Region the necessary strengths to face the difficult questions ahead: What policies for upgrading competitiveness are needed for the Region to succeed in an environment with low growth in Europe and the US, and a shift of economic activity towards emerging economies in Asia and Latin America? And what structures for collaboration can support these policies in an effective way, developing a robust model for joint action among neighboring regions despite the uncertainties about the future architecture for policy making within the European Union?

This section of the State of the Region Report describes the current economic performance the Baltic Sea Region and the Region's underlying competitiveness driving these outcomes. It provides data and analysis on the current economic climate in the Region and on indicators of competitiveness – from economic outcomes to competitiveness fundamentals.

Section A: Competitiveness in the wake of the global crisis

Competitiveness has been high on the agenda of policy makers in recent months. In late January, US President Obama devoted the State of the Union address to his plans for how to improve the competitiveness of the US economy. Around the same time, Germany and France proposed a 'competitiveness pact' for the European Union that in March of 2011 became the Euro Plus Pact.

While politicians visibly agree on the central role of competitiveness as a guiding principle for economic policy, these two examples also highlight the confusion that continues to surround the concept: US President Obama did not use the term competitiveness in his speech to avoid any controversy. He was still lambasted by Paul Krugman, the Nobel Laureate, for proposing, as Krugman saw it, industrial policies putting the US in zero-sum competition with the rest of the world. Germany and France launched their initiative out of concern about the lack of some Euro-Zone countries' cost competitiveness. For these countries to regain cost competitiveness, they focused on structural reform and more conservative fiscal policies to limit the forces that had pushed up cost levels in the past.

The notion of competitiveness used in the Baltic Sea Region and this Report differs from both these perspectives: Competitiveness is the expected output per working age inhabitant that a location can produce in a sustainable manner, based on its qualities as a place to do business.

At its core, competitiveness is a broad measure of national productivity, covering both the productivity of employees in doing their jobs and of the overall economy in mobilizing the working age population to actively participate in value creation. Competitiveness sets the level of prosperity that a location is able to generate, without having to rely on endowments or access to foreign funds.

Defined this way, competitiveness is not equivalent to higher world export market shares or more value added in specific sectors, goals that Krugman fears drive the US policy agenda. While exports and market leadership are often associated with higher standards of living, they can also be achieved through policies like exchange rate suppression or subsidies that are welfare reducing. Competitiveness as used here is also not equivalent to stable or low unit labor costs, goals that featured heavily in the discussions about the European competitiveness pact. While unit labor costs are an important signal of macroeconomic conditions, wages and productivity can be 'in balance' at low or high levels of welfare.

Building on the notion of competitiveness prevalent in the Baltic Sea Region, this section of the Report covers three different dimensions of the performance of the Region, following the methodology developed over the last few years.

The first part provides an overview of the current economic climate. The Baltic Sea Region has by-and-large been a role model for how to deal with the global economic crisis. But the crisis has left deep marks in some of the Region's economies. And an anemic recovery in the US and a prolonged public debt crisis in Europe are creating an environment where the growth outlook is significantly more uncertain than just a few months ago, even for the strongest performers in the Region.

The second part tracks the competitiveness of the Baltic Sea Region. It discusses data on economic outcomes, components of economic prosperity as well as other indicators of economic activity, particularly on trade, investment, and innovation. This data is then put into the context of an assessment of the competitiveness fundamentals across the Region. The Baltic Sea Region has registered an impressive recovery over the last two years, drawing on its strong competitiveness fundamentals. The strength of the recovery owed also much to the depth of the previous contraction and the solid growth in key markets in Europe as well as emerging economies that the Region is serving. Looking forward, the data indicates that countries in the Region hardest hit by the crisis need to find new ways to stimulate sustainable growth. The Region overall is facing the challenge of how to ensure it continues to be able to capture a significant share of value in a global economic environment, where activity is shifting towards Asia and other emerging economies.

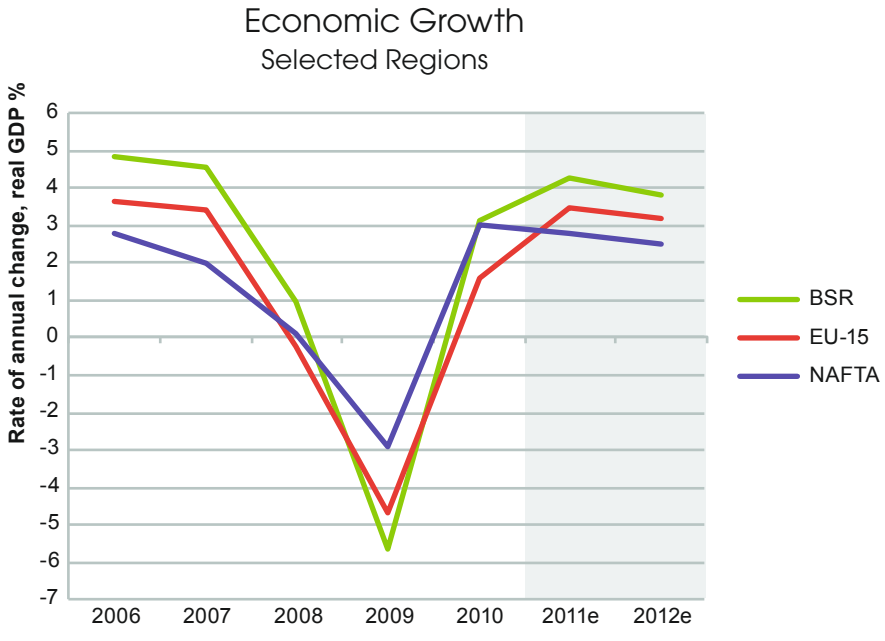
The third part summarizes key observations from the analysis, and develops implications for policy.

1. Current economic climate in the Region

The State of the Region Report does not aim to provide an in-depth assessment of the current economic climate in the Region. Many government agencies, research institutions, and banks are focused on this task. Instead, the Report concentrates on medium-term data related to the level of economic performance that the Baltic Sea Region countries will be able to achieve over time. The short-term fluctuations of the economy provide only very limited information on these trends. But they set the context in which many policy decisions with longer-term implications are being made.

The Baltic Sea Region had until 2008 grown at rates close to the global average, significantly above the level of the North American and the Western European economies. During the crisis of 2009, it then experienced a much more dramatic contraction than other world regions. In 2010, the Region recovered not only more quickly than had been expected but also outpaced the EU-15 and, by a whisker, the NAFTA region. For 2011, growth is expected to accelerate some more but at a lower rate before tapering off in 2012.

A slowdown in growth had been expected as the fiscal and monetary policy stimuli ap-



Source: EIU (2011)

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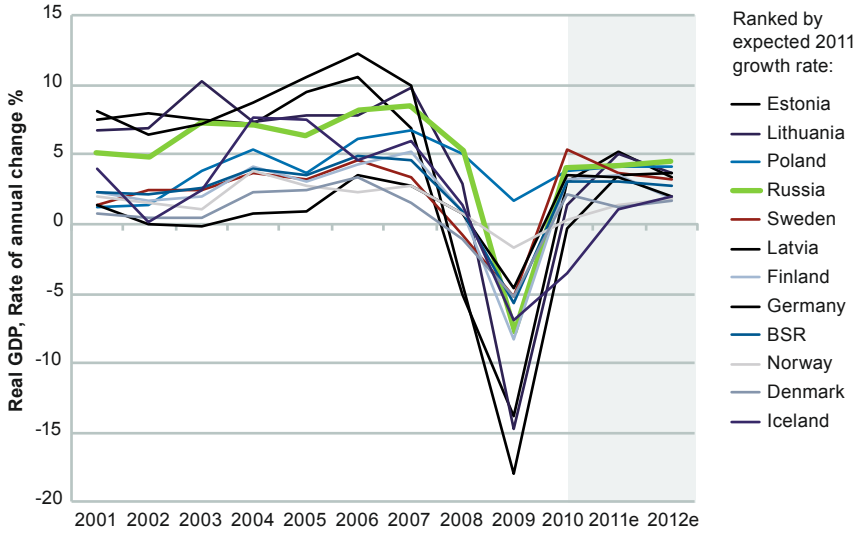
plied in the Region and elsewhere were going to be removed, and as the economy was bouncing back to more normal levels of capacity utilization and inventories. In fact, in some of the Nordic countries, Sweden in particular, there had been concerns about the recovery being too strong and in danger of leading to overheating. But the renewed uncertainty emanating from the financial markets could lead to a much more significant reduction in growth rates in the remainder of 2011 and in 2012. So far most observers see the Baltic Sea Region better equipped than others to deal with this new challenge. Less (or negative) tailwind from the global economy could slow the Baltic Sea Region to a lower but still stable and positive growth path. But, at least for some parts of the Region, it also entails the danger of being pushed into a negative spiral of difficult additional budget consolidation and lower domestic demand.

Inflation has slowed down in 2010, even though not by as much as expected. The faster recovery pushed up prices, including those for natural resources where the global demand from emerging economies remained strong throughout. Given the pick-up in economic activity and the huge increase in money supply, as a result of the monetary stimuli provided during the crisis, an increase in inflation seemed natural to expect. Some Central Banks in the Region have already started tightening their monetary policy. The recent crisis has, however, led many observers to anticipate interest rate tightening to be much slower than previously expected. The Region continues to run a significant current account surplus. The reduction of the surplus in 2010 was smaller than expected given strong foreign demand. Given the robust demand growth in the Baltic Sea Region in 2011, it is now forecasted to come down somewhat.

Within the Baltic Sea Region, Sweden registered the strongest GDP growth in 2010, followed by Russia, Poland, and Germany. Iceland and Latvia were the only countries in the Region that continued to see their GDP contract during 2010. Estonia's growth provided at more than 3%, together with Sweden, the most positive surprise relative to the forecasts early in the year. For 2011 and 2012, growth rates across the Region are expected to converge at rates between 1% (Iceland) and 5.2% (Estonia) in 2011 and between 1.6% (Denmark) and 4.2% (Russia) in 2012 respectively. The most recent update of the IMF's World Economic Outlook, published in September, projects significantly lower growth for 2011 than implied in these EIU estimates. In the wake of the financial market developments during the summer, many countries, most recently Denmark and Sweden, have sharply downgraded their growth outlook.

Economic Growth:
Baltic Sea Region countries



Source: EIU (2011)

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Growth in the Baltic Sea Region continues to be more driven by domestic consumption than elsewhere in Europe and (by a small margin) the OECD. This is largely the result of a more positive labor market situation and a more robust growth outlook. The transition from public to private consumption as the main growth driver has occurred already in 2010 and not, as had been expected, in 2011. For 2012 the gap between private and public sector consumption growth is forecasted to increase further, albeit by only a small amount. Trade has in 2010 resumed at a much stronger rate than expected and is expected to further grow at a solid rate this year. Imports continue to grow stronger than exports in the Baltic Sea Region, but the gap in growth rates is getting smaller. In the EU-27 and the OECD, export growth continues to outpace domestic demand for foreign goods. Investments have been anemic in 2010 in the Baltic Sea Region. For 2011 investments are expected to grow again, but the Region has still not made up for the gap that has developed versus the EU-27 and the OECD, where investment resumed earlier. Overall, the Region's current patterns of GDP growth look balanced and benign.

The risks to this scenario, however, seem now squarely on the negative side: The sovereign debt crisis and the financial market contraction that has followed could result in lower private consumption and investment growth. The OECD has in its September assessment already forecasted a significant slowdown across major economies. For Germany, a key part and export market of the Baltic Sea Region, it estimates a GDP contraction of 1.4% (annualized quarter-to-quarter) for the 4th quarter of 2011. Such a global slowdown would remove the support that external demand is so far expected to deliver to the Region's economies.

Across the Region, private consumption is strongest in the Nordic countries, Russia, and Poland, both in 2010 and the 2011 forecast. Poland was in 2010 the only country in the Region where public consumption growth outpaced private consumption growth. Consumption growth was across the board negative in the Baltic countries. Iceland, Latvia, and Denmark expect public consumption to shrink in 2011. Investments resumed growth in 2010 in Russia, Sweden, and Germany, while remaining flat or shrinking in the rest of the Region. The Baltic countries, Germany, Sweden, and Poland registered the strongest export growth in 2010. Finland and Denmark are forecasted to increase export growth in 2011, while most other countries in the Region will experience a slowdown of export growth. Country-level import growth generally shadows export growth trends; only Russia has experienced first a much more dramatic drop in 2009 followed by import growth of 25% in 2010 and 14% (expected) in 2011.

Growth Rates of GDP Components

Selected Regions

	Baltic Sea Region		EU-27		OECD	
	2010	*2011e*	*2010*	*2011e*	*2010*	*2011e*
Consumption						
Private	1.8%	2.1%	0.8%	0.8%	1.7%	1.7%
Public	0.6%	0.5%	0.7%	0.2%	1.2%	0.6%
Investment	0.2%	4.7%	4.0%	3.6%	8.4%	3.8%
Trade						
Export	7.8%	7.7%	10.4%	7.0%	11.5%	6.3%
Import	10.3%	8.3%	9.4%	5.7%	11.1%	5.6%

Source: EIU (2011) State of the Region-Report 2011

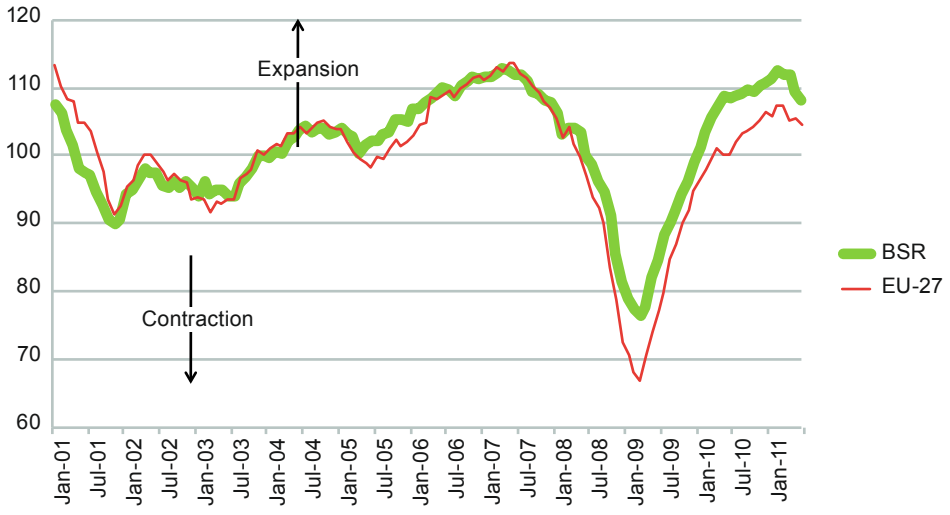
Economic sentiment in the Region remains positive, but has started to cool off significantly. Starting in May 2010, the rapid improvements of economic sentiment, which had been registered since the deepest point of the recession was passed in March 2009, began to become slower and more erratic. Since February 2011, sentiments have then become more pessimistic as the extent of the European sovereign debt crisis has become more and more visible. National surveys like the ZEW index in Germany indicate a further rapid deterioration. Economic sentiment in the Baltic Sea Region remains better than in the EU-27, but the positive gap has dropped to levels last seen in 2008.

The evolution of economic sentiments has become increasingly heterogeneous across the Region. Between mid-2009 and the first quarter of 2010 all countries saw sentiments improve, if at different rates. During the second half of 2010 trends started to diverge.

Denmark experienced the most extreme changes: After Danish economic sentiment reached the most optimistic levels of the Region in May 2010, the announcement of a package for public sector consolidation that month was the starting point for a six-month, 10%-point drop that pushed sentiments into contraction territory. Then opinions started to shift and most of the losses were recovered by April 2011. Since then, however, sentiments have rapidly deteriorated and Denmark's economic sentiment indicator now puts it at the bottom of the Baltic Sea Region, in a close tie with Poland. Swedish sentiments stabilized at a high level in mid-2010 but have been starting to drop since early 2011. German sentiment caught up to the buoyant Swedish levels in late 2010 after strong improvements and has since then matched the slow deterioration in Sweden. Finland reached its top mark in November 2010, Poland in March 2011, and Estonia in April 2011; since then, all three have seen sentiments weaken. Lithuania experienced a steady positive trend, with the exception of a short drop in early 2011. Latvia also registered positive, but minimal changes for most of the period since August 2009, with a small drop in April 2011.

Unemployment and public debt were two of the key casualties of the global crisis: unemployment as the market response to a sudden drop in demand; public debt as the result of government responses to soften the impact of market forces. On unemployment, the Baltic Sea Region saw rates increase about as much as the European average, but from a lower level. This performance was better than expected. For 2011 and 2012, the Baltic Sea Region is expected to quickly reduce unemployment rates while they should stay almost stable across the EU-15. The Baltic Sea Region is now matching the unemployment rate of the

Evolution of Economic Sentiment
Baltic Sea Region vs. EU-27



Note: BSR excluding Iceland, Norway, and Russia
Source: EU (2011)

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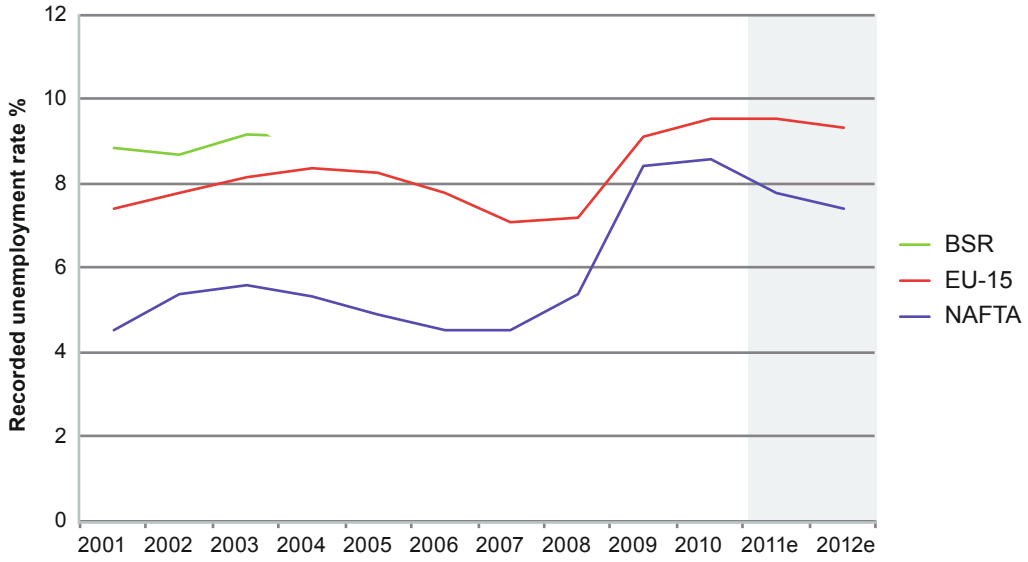
NAFTA region, after having historically registering rates that were 3-4%-points higher.

On government debt, too, the Baltic Sea Region performed better than expected. The increase in debt levels was smaller than in the EU-15 and NAFTA regions, and is expected to be reversed over the next few years. The EU-15 debt level is at about 80%, expected at double the Baltic Sea Region rate. The NAFTA region's debt level is still somewhat lower at 67.6% expected for 2011, but continues to rise.

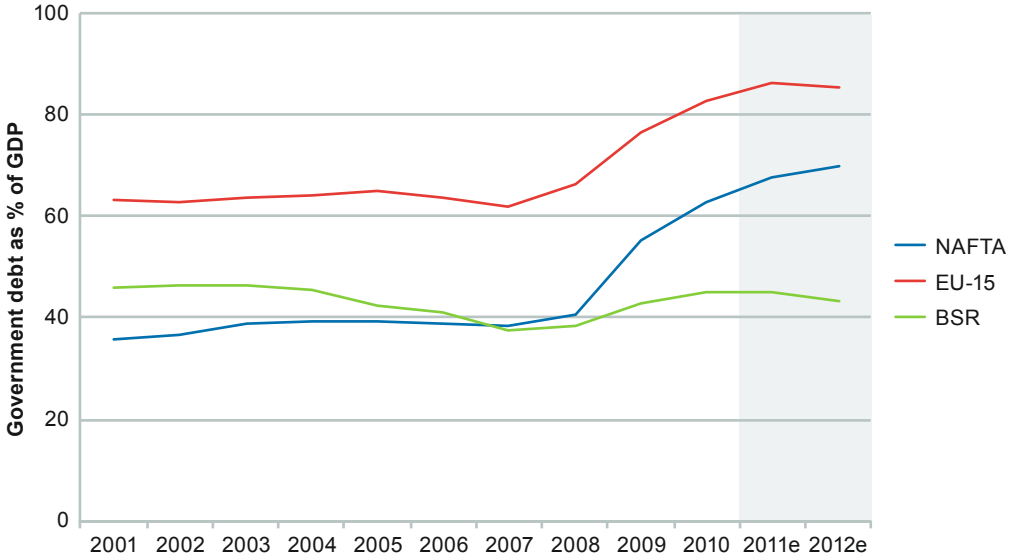
For individual Baltic Sea Region countries the picture is again quite different. Unemployment rates in Sweden, Finland, and Iceland have been on almost identical paths since 2008, dropping by around 0.5%-points annually since 2009. Prior to the crisis, the three countries had traditionally very different levels of unemployment,

Unemployment
Selected Regions



Source: EIU (2011) State of the Region-Report 2011

Government Debt
Selected Regions



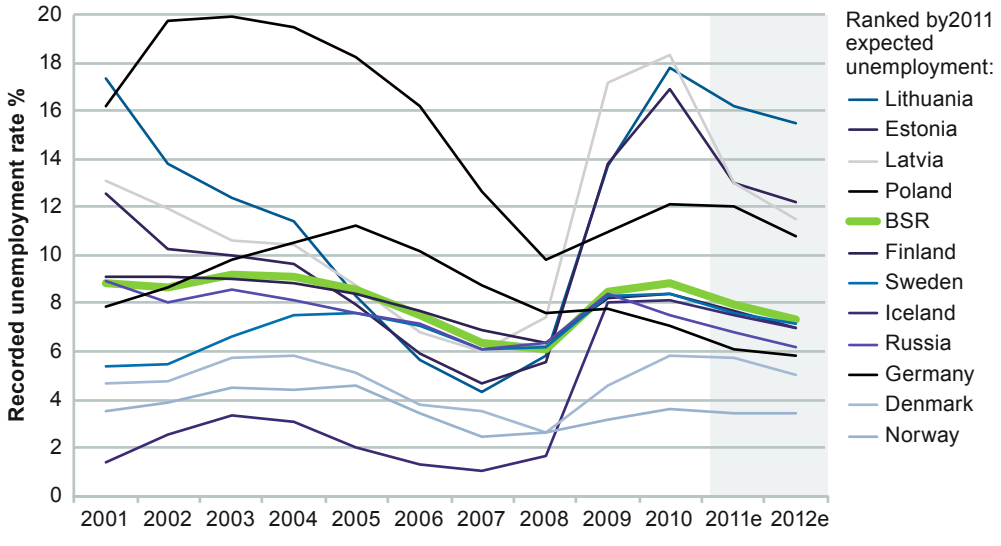
Source: EIU (2011) State of the Region-Report 2011

with Finland the highest and Iceland the lowest. Denmark's unemployment remains lower, and is slowly recouping the losses incurred during the crisis. Norway's unemployment rate had not been affected much by the crisis and remains stable at very low levels. On public debt, Norway, Finland, and Denmark are on a relatively stable level, Norway with a slightly positive, the others with a slightly negative trend. Sweden has made more headway on budget consolidation and is on course to reduce its debt level quite significantly. Iceland has stabilized its debt at the high levels inflicted by the implosion of its financial system. Its public deficit has come down from 13.5% in 2008 to 7.8% in 2010, with a further reduction expected for 2011.

The Baltic countries all experienced in 2009 and to some degree in early 2010 a huge rise in unemployment from low initial levels. But rates then also started to drop significantly, especially in Latvia and Estonia. Part of this improvement might, however, also be a result of migration and of people with little hope of finding a job (and no incentive from the social security system to keep being registered as unemployed) leaving the labor force. Debt levels have remained low by international standard, helped by the fact that neither of the Baltic countries had assumed any Soviet Union era debt when regaining independence. Even in Latvia, where the government had been forced to turn to a coalition of neighboring countries in the Region, the EU, and the IMF to match the government financing shortfall when financial markets were essentially closed during the crisis, debt levels are only marginally above the Baltic Sea Region average. Estonia managed to run a budget surplus in 2010, while both Latvia and Lithuania are gradually reducing their deficits from around 9.5% in 2009 to 7.5% in 2010 and an expected 5.5% in 2011. The current account surpluses, which all three countries had suddenly registered during the crises after years of large current account deficits, are starting to disappear. Inflation is expected to pick up in 2011, reaching around 4%.

Among the three countries only partly in the Baltic Sea Region, Poland experienced only moderate increases in unemployment and public debt. The unemployment rate is now falling and remains far below the level of the Baltic countries. Public debt levels continue to grow, with public deficits of around 3% of GDP in 2010 and 2011. Germany experienced a roller coaster of trade first collapsing and then growing at double digit rates. Remarkably, unemployment remains to be on a downward trend. This was achieved through labor market policies that enabled companies to keep on workers at reduced working hours and through fiscal measures that pushed the public debt level above the 80%. The constitutional debt limits

Unemployment
Baltic Sea Region Countries



Source: EIU (2011)

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will now force the German federal government to reach neutral budgets over the business cycle by 2016; federal states will face the same limits from 2020. Russia's economic fortunes remain largely tied to the trends in the oil price. The stronger than expected recovery of the global economy in 2010 provided significant support; unemployment is on a downward trend. Russia's main challenges remain structural rather than cyclical. Russia's Northwestern Region, together with the Central Region around Moscow, which is the main driver of the Russian economy, has recently registered a stronger performance than the overall economy.

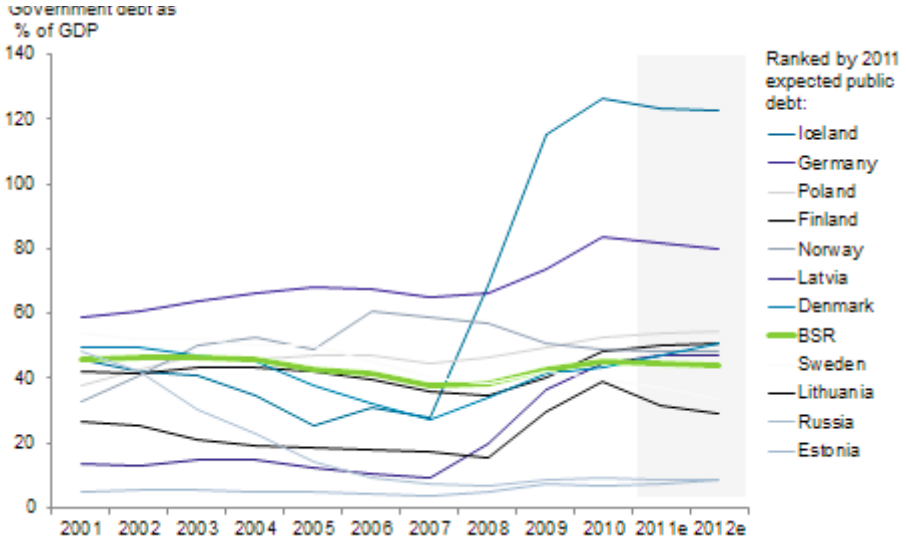
Overall, the Baltic Sea Region has, despite suffering a very deep initial impact, come through the crisis better than expected and better than most of its peers. There remains a significant degree of heterogeneity across the countries in the Region, despite the common positive trend.

But the main worry is no longer the increasing diversity across the Region, but the shadows cast by the renewed uncertainties about the economic climate in the world economy, especially in the US and the EU. Exports could slow down and, probably most worryingly, the huge losses on financial markets could lead consumers and companies to curtail their spending. The stable situation on domestic markets, especially the positive labor market trends, are the best sign that such a scenario does not need to materialize. Governments in the Region are reacting: Faced with a weakening economy, the Danish government had before the country's national elections announced a stimulus package to stabilize demand into 2012, accepting a temporary deficit increase. The new government now taking over seems to be poised for moderately more expansionary policy. The Swedish government has in a still more benevolent domestic economic climate shelved plans for a fifth income tax reduction. The budget put forward in September proposes measures with a total budget of EUR 1.6bn, largely focused on infrastructure spending and a reduction of VAT rates for the restaurants and hotels with the aim to stimulate job creation especially for younger workers. Central Banks throughout the Region have for the time being stopped their interest rate tightening, at least temporarily.

It is obvious that there is no room to implement the same aggressive monetary and fiscal policy efforts that were deployed two years ago; interest rates are already low and in most countries there is no room for additional deficit-spending. At the same time, some of the imbalances present at the outset of the 2008 crisis - on real estate prices, domestic credit, and external trade – are now at much more normal levels. With fewer opportunities to quickly reignite growth and more danger of moving into an accelerating recessionary cycle, the Baltic Sea Region – as Europe more generally - needs to be prepared for an extended period of low growth.

Government Debt

Baltic Sea Region countries



Source: EIU (2011)

State of the Region-Report 2011

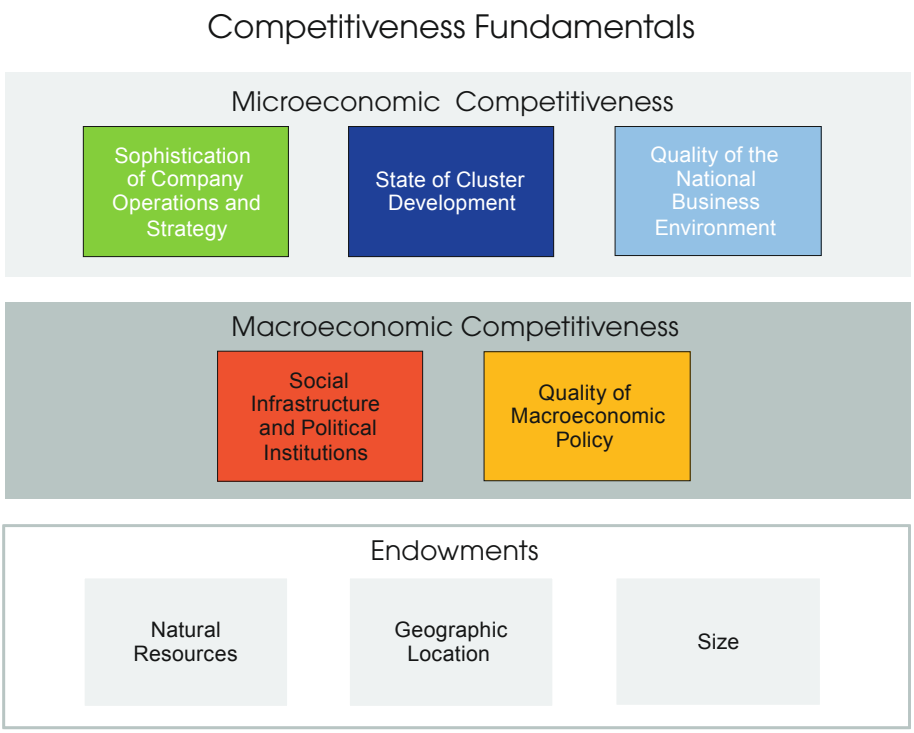
2. Foundations of sustainable prosperity: Competitiveness of the Baltic Sea Region

The State of the Region Report aims to provide policy makers in the Region with data and analysis that support fact-driven policies designed to raise the level of prosperity, which the Region can sustain in the medium term. It also aims to provide investors and analysts looking at the Region with key metrics to understand its economic potential.

Effective policies to increase levels of sustainable prosperity need to be based on a robust framework that draws on the available knowledge on the drivers of medium-term prosperity levels. The competitiveness framework applied here defines competitiveness as the expected output per working age inhabitant that a location can sustain based on its quality as a place to do business. Its focus on explaining a broad measure of national productivity, covering both the productivity of employees (labor productivity) and the productivity of the economic system to mobilize the available labor force (labor mobilization), is driven by the consensus view in the academic literature that differences in productivity are the critical driver of long-term differences in prosperity levels across locations.

The notion of "quality as a place to do business" in the definition of competitiveness integrates a broad literature on the drivers of productivity differences across locations. There is wide consensus that many things matter, even when researchers differ in the relative weight they give to individual factors. The approach used here distinguishes macroeconomic and microeconomic competitiveness. Macroeconomic factors, covering both the institutional context and macroeconomic policies, set the context in which economic activity takes place. The policies that affect these factors are set by central government or other central agencies, even when implementation is sometimes more localized. Microeconomic factors, covering the quality of the business environment, the presence of clusters, and the sophistication of companies, set the levels of labor productivity and mobilization in a much more direct way. They are influenced by policies and decisions made by a wide range of government agencies at all levels, companies, and other institutions such as universities.

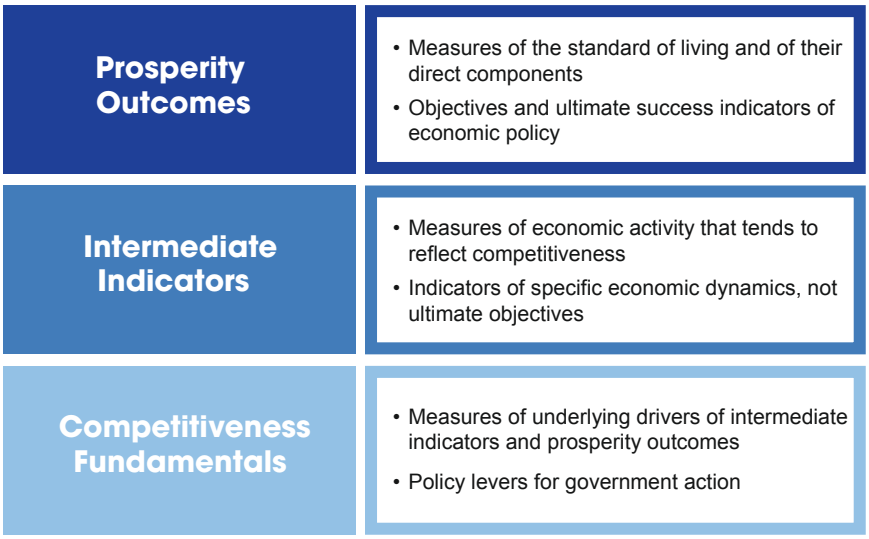
Effective policies to increase levels of sustainable prosperity also need to be based on a data-driven analysis of the specific factors that restrict the level of competitiveness that a location can reach at a certain point of its development. There is an increasing view in the academic literature that the impact of a policy depends on the current quality of many other competitiveness factors in that location. Only a comprehensive diagnostic of location-specific conditions can thus identify the most urgent policy actions. This view has over the last few years found increasing reflection in policy practice. The EU 2020 process, for example, asks EU member countries to identify key bottlenecks keeping back productivity based on such a diagnostic.



As in previous years, the State of the Region Report provides data and analysis at three levels to support the competitiveness diagnostics for the Baltic Sea Region: *Prosperity outcomes* give a sense of how competitiveness is reflected in the standard of living, the ultimate objective of economic policy. *Intermediate indicators* are analytical indicators that track the translation of competitiveness through economic activity and structural patterns into ultimate prosperity outcomes. *Competitiveness fundamentals* are the root causes of the higher level outcomes and indicators observed, and are the level at which economic policy can most effectively intervene. Because of limitations in data quality and availability as well as the complex relationships across these three layers, an integrated view provides more robust insights than reliance on an individual dimension of data.

The analysis here builds on a broad range of available research that connects specific prosperity outcomes to unique patterns of intermediate economic activity and particular dimensions of competitiveness fundamentals. While a full-scale diagnostic is beyond the scope of this Report, the data and analysis provided here enable policy makers across the Region to get a better understanding of the action priorities for improving competitiveness through collaborative action at the Baltic Sea Region level. And it gives investors and analysts much deeper insights into the opportunities that exist in the Region than any narrow type of data could.

The Three Layers of Competitiveness Assessment



2.1 Prosperity outcomes

The central measure of prosperity we use is gross domestic product (GDP) per capita, adjusted by purchasing power parity. Additional insights into the patterns of prosperity creation can be derived from a decomposition that separates the impact of labor productivity and labor mobilization on overall GDP per capita.

Prosperity

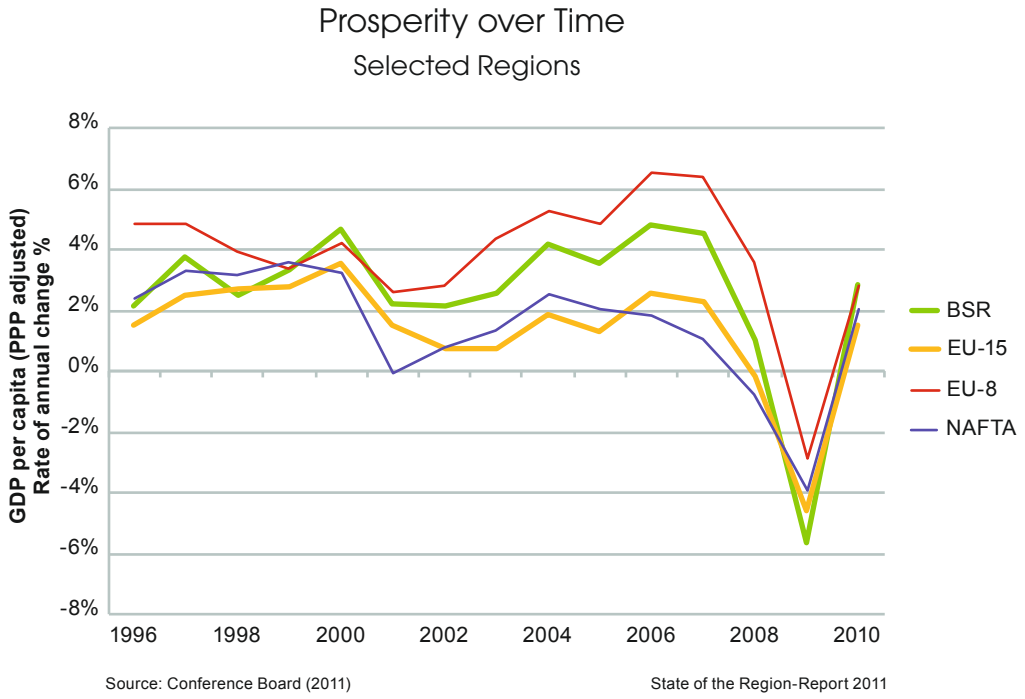
The Baltic Sea Region remains a solidly prosperous region. Its GDP per Capita (PPP adjusted) level now reaches 94% of the EU-27 average, compared to 90% in 2005 and 85% in 2000. Heterogeneity across the Region is large: The Nordic countries[1] and Germany are among the most prosperous countries in Europe and globally. The Baltic countries, Poland, and Russia register at the lower range of the EU, with Latvia the poorest country in the EU apart from Bulgaria and Romania reaching a prosperity level similar to Chile, Malaysia, and Mexico. Differences in consumption levels tend to be smaller than the GDP per Capita data suggests; while the total consumption expenditure of households accounts for only about 45% of Swedish GDP, it accounts for more than 60% of Latvian GDP.

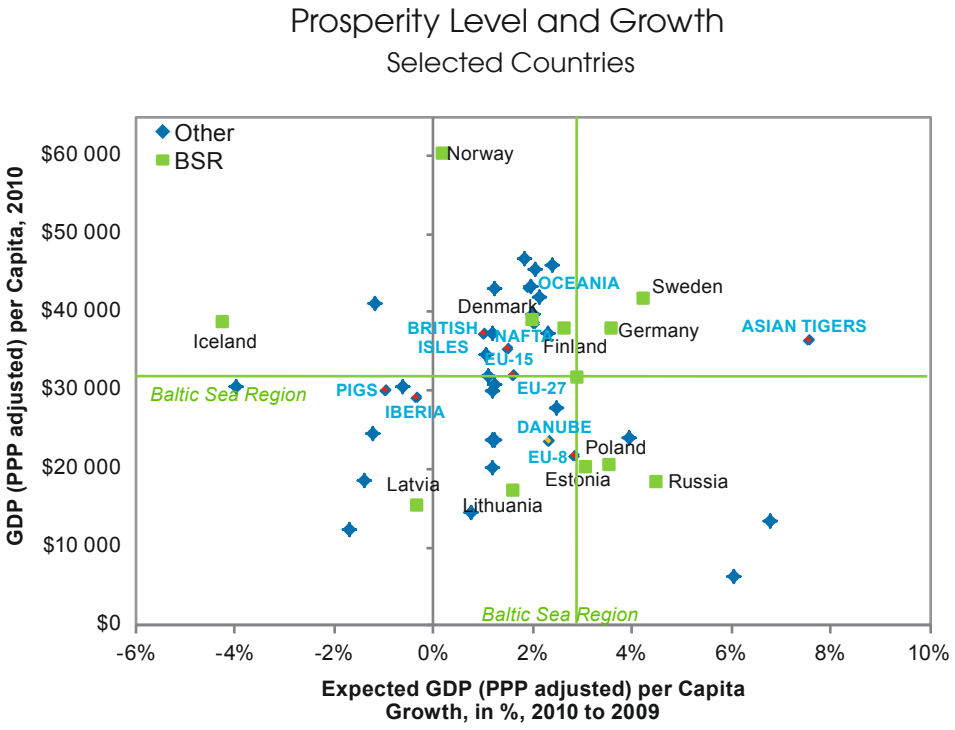
1 For Norway we only use Mainland GDP figures in the calculations. Statistics Norway reported Mainland GDP to be at 66% of total Norwegian GDP.

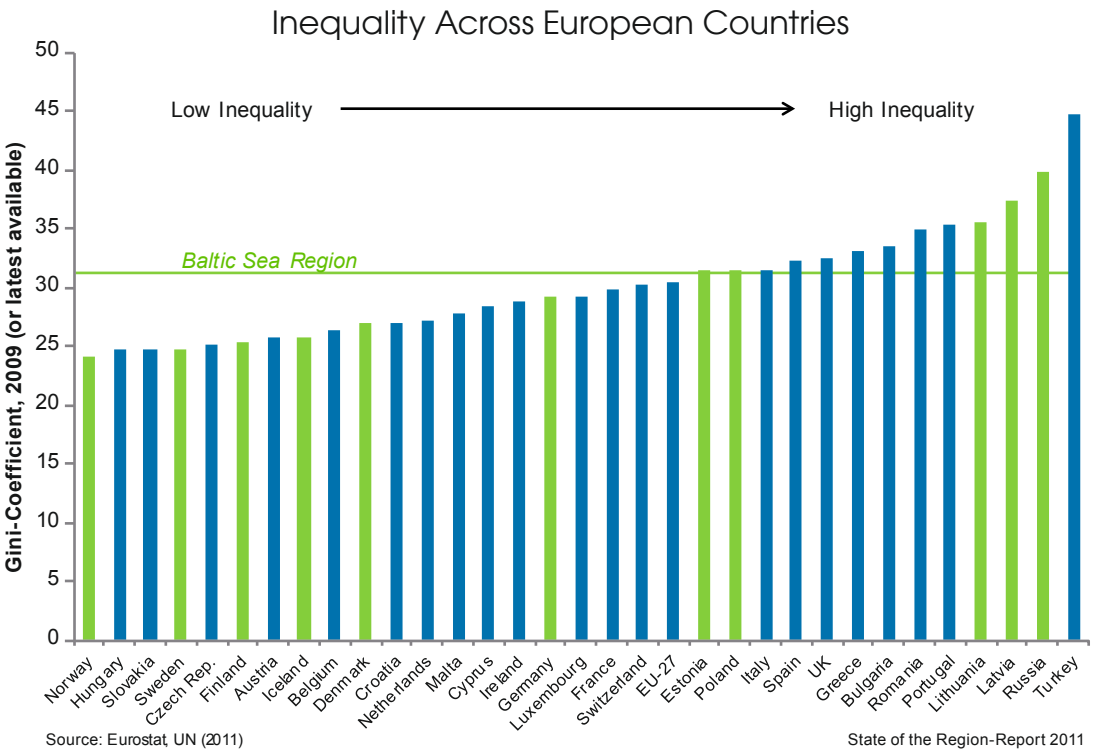
The Region has in 2010 recouped about 48% of the GDP per Capita losses it had incurred during 2009. This is slightly less than the NAFTA region, but significantly better than the EU-27, both of which had a less severe contraction during the crisis. The heterogeneity of prosperity change across wider European regions during 2010 has been significant: The Baltic Sea Region registered the strongest growth rate at 2.9%, followed by the EU-8 at 2.8% and the Core Euro-Zone (Euro-zone excluding Portugal, Spain, Ireland, and Greece) at 2.3%. The EU-8 are now almost back at their pre-crisis GDP per Capita level. The EU-15 and, within it, the British Isles registered modest positive growth at 1.5% and 1.0% respectively. For the British Isles in particular this was a low recovery given the 4.3% contraction the previous year. The worst performers in Europe where the Iberian Peninsula (-0.3%) and the broader group of PIGS (Portugal, Ireland, Greece, Spain) countries (-1.0%), both adding to GDP losses of around 4% the previous year. The Danube region, included this year for the first time and economically dominated by Southern Germany, did slightly worse than the Baltic Sea Region. Its 2.3% growth allowed it to make up 45% of the 2009 losses. Outside of Europe, ASEAN and the Asian tigers saw growth resume strongly at 6.1% and 7.6% respectively. NAFTA and Oceania grew at 2%.

Within the Baltic Sea Region, Russia and Sweden registered the highest 2010 GDP per Cap-

ita growth. Sweden and Germany recouped more than 70% of their 2009 GDP per Capita loss; Russia followed at roughly 55%. The largest reversals in growth rates were registered by the Baltic countries. Estonia and Lithuania returned to prosperity growth, recovering respectively about 20% and 10% of their 2009 losses. Latvia's GDP per Capita level was essentially flat after the 17.4% drop in 2009. Finland and Denmark achieved modest prosperity growth at 2.6% and 2% which amounted to about a third of their 2009 contraction. Poland, the only country in the Region that had registered positive GDP per capita growth in 2009, doubled its prosperity growth rate to 3.5%.







One important factor that qualifies the value of GDP per Capita as a measure to understand the level of prosperity enjoyed by the typical citizen is the degree of income inequality that exists in a society. The Gini-coefficient, a measure of income concentration across population, is an indicator widely used to measure inequality. It ranges from 0 (every individual has the same income) to 100 (all income captured by one individual).

The level of inequality in the Baltic Sea Region is at an aggregate level similar to the EU-27 average. Income in the Region is more equally distributed than in most other parts of the world, including North America and Oceania among rich regions, and Asia and Latin America among less prosperous regions. But the regional average blurs the significant differences that exist within the Baltic Sea Region. The Nordic countries are among the most equal in the world; Iceland even saw a recent increase of inequality prior to the crisis reversed. Russia, Latvia, and Lithuania, however, are among the most unequal societies in Europe. Their income inequality is not dramatic by global standards. But it does indicate that some segments of society are either unequipped to compete or find barriers to engage in the economy. The extent of redistributive policies might also play a role: Latvia and Lithuania (as well as Iceland, Poland, and Estonia) are far below the EU-average in terms of the change in income inequality through government cash benefits and direct taxes.

A final indicator is the subjective satisfaction with life that citizens report. The Nordic countries range among the upper countries in the OECD on this measure, with Denmark ranked first overall.[2] Germany is ranked in the middle, Poland in the lower group, and Estonia among the lowest ranked countries. The EBRD's 2010 Life in Transition survey shows the same relative ranking. It finds Russians to be less satisfied than Estonians, with Latvia and Lithuania trailing further behind.

Prosperity accounting

Prosperity can be mathematically decomposed into labor productivity and labor mobilization. In this Report, we operationalize these concepts through GDP per hour worked (PPP adjusted) and hours worked per capita. The data on hours worked is not very reliable, especially for Russia and the Asian countries, but gives a useful directional perspective.

Compared to other regions, the Baltic Sea Region continues to do better on labor mobilization

2 http://www.oecdbetterlifeindex.org/topics/life-satisfaction/

than on labor productivity. But the differences between these two dimensions are smaller than in most other regions: Oceania is the only peer region that outperforms the Baltic Sea Region on both dimensions; the Danube region is the only one that performs worse across the board. All other regions are stronger in one but weaker in the other dimension. The imbalances between the two dimensions of prosperity in the Baltic Sea Region were reduced in 2010. Labor productivity improved while labor mobilization remained flat. Most other regions experienced the same relative changes, often even to a larger degree.

Within the Baltic Sea Region, Germany continues to lead the Region on productivity while it does worst on labor mobilization. The Nordic countries combine equally strong productivity with a much more solid labor mobilization record. Iceland continues to stick out with exceptionally high levels of labor mobilization. Russia, Poland, and Latvia have low labor productivity but relatively high labor mobilization. Lithuania ranks relatively weak on both dimensions.

Labor productivity across the Baltic Sea Region, measured by GDP (PPP adjusted) per hour worked, increased by 3% in 2010. Among the

Prosperity Decomposition

Selected Cross-national Regions in 2010

GDP per Capita (PPP)		Employment-Factor		Productivity-Factor (PPP)
Oceania		Asian tigers		Core euro-zone
NAFTA		Oceania		British Isles
British Isles		EU-8		EU-15
Core euro-zone		Baltic Sea Region		Oceania
Asian tigers		NAFTA		NAFTA
EU-15	=	Danube Region	X	EU-27
EU-27		PIGS		Iberian Penisula
PIGS		EU-27		PIGS
Baltic Sea Region		British Isles		Baltic Sea Region
Iberian Penisula		Iberian Penisula		Asian tigers
Danube Region		EU-15		Danube Region
EU-8		Core euro-zone		EU-8

Note: Working hours for Russia are estimated
Source: Groningen Growth and Development Centre and The Conference Board (2011), authors'calculations

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Prosperity Decomposition

Baltic Sea Region Countries in 2010

GDP per Capita (PPP)		Employment-Factor		Productivity-Factor (PPP)
Norway		Russia		Germany
Sweden		Iceland		Sweden
Denmark		Poland		Norway
Iceland		Baltic Sea Region		Denmark
Germany		Latvia		Finland
Finland	=	Sweden	X	Iceland
Baltic Sea Region		Finland		Baltic Sea Region
Poland		Norway		Estonia
Estonia		Denmark		Lithuania
Russia		Estonia		Poland
Lithuania		Lithuania		Latvia
Latvia		Germany		Russia

Note: Working hours for Russia are estimated
Source: Groningen Growth and Development Centre and The Conference Board (2011), authors'calculations

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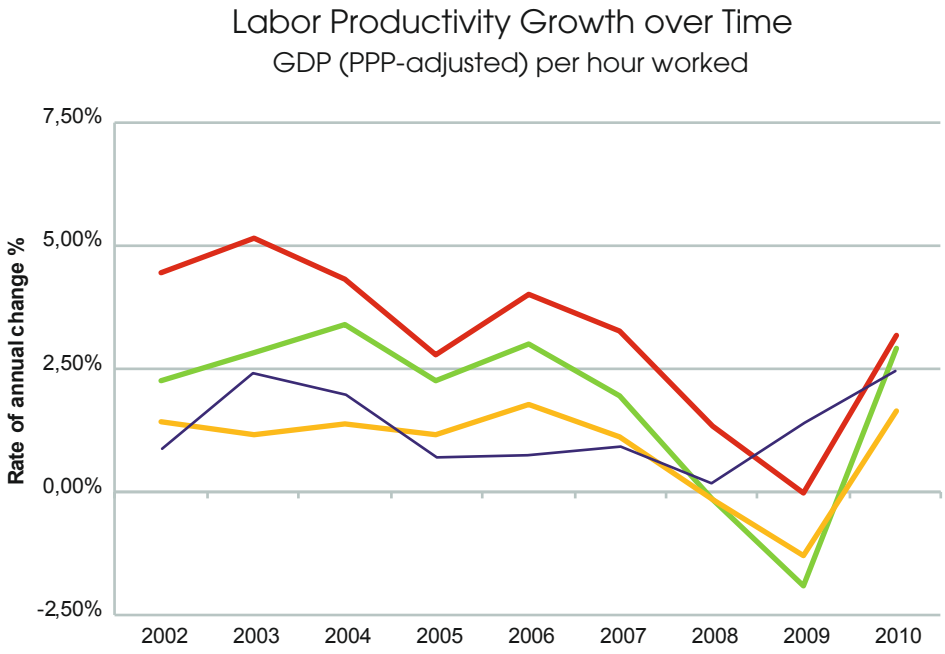
other regions included in the comparison only the EU-8 (3.2%) and the Asian tigers (6.7%) reached a higher level of productivity growth. The Danube region came closest at 2.6%, while most other regions in the rest of Europe grew between 1.3% and 1.9%.

Within the Baltic Sea Region, Germany continues to register the highest level of labor productivity. Its labor productivity growth has, however, been below the regional average, and the country remains below its top level of labor productivity reached in 2007. The three Baltic countries and Russia registered the Region's highest labor productivity growth in 2010, followed by Sweden. Despite this growth, Russia and Latvia have the lowest productivity level in the Region. Labor



Source: Groningen Growth and Development Centre and The Conference Board (2011), authors' calculations

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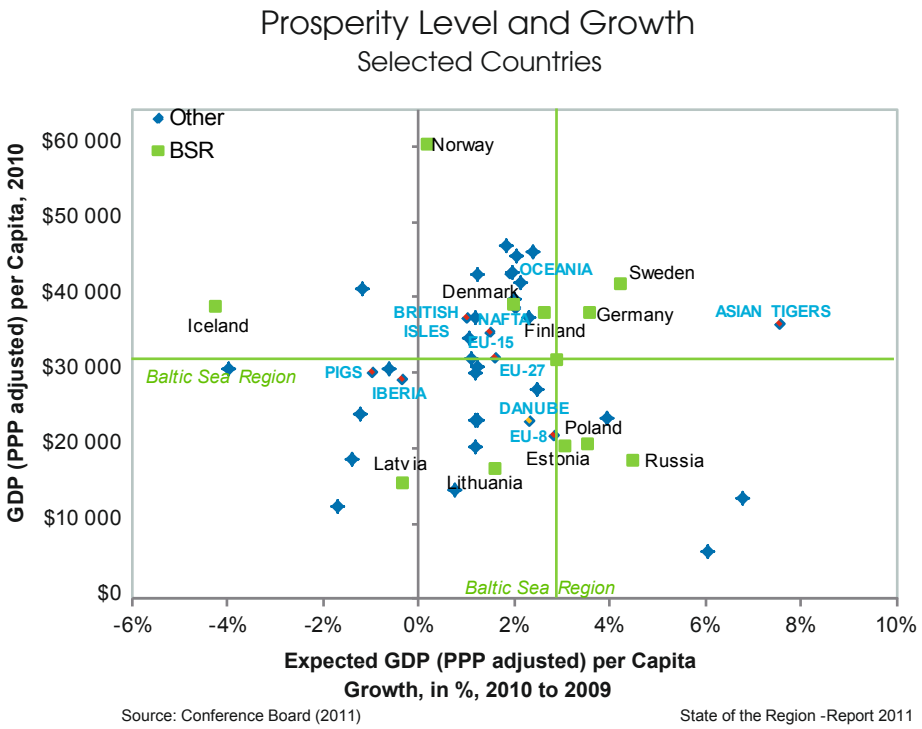

Source: Conference Board (2011)

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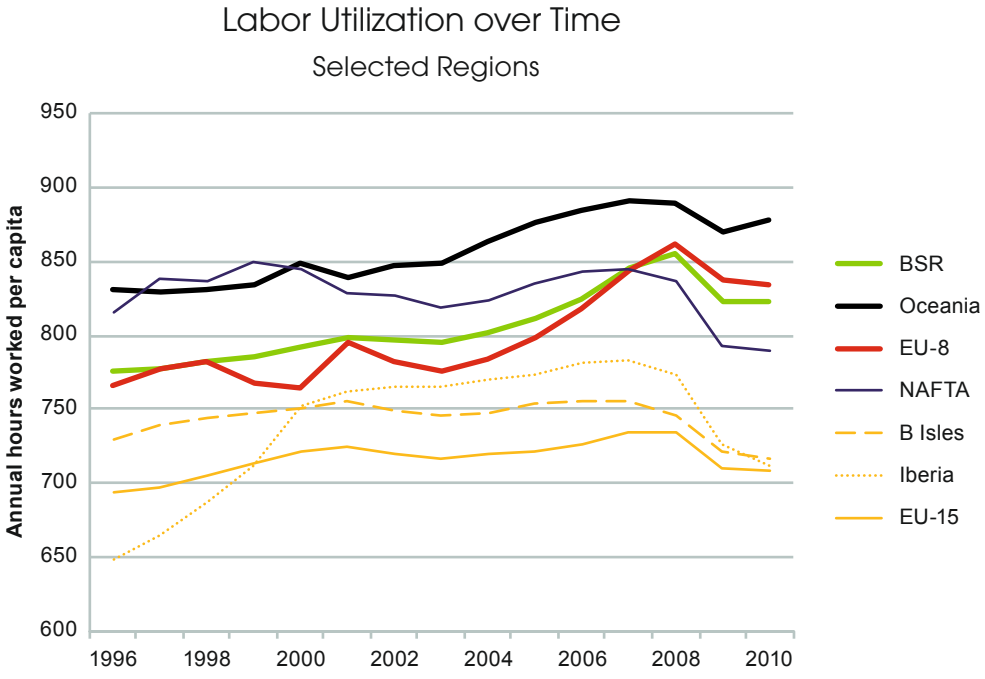
productivity in Finland and Norway was close to the modest German level. Danish labor productivity growth was in 2010 the highest among the more prosperous countries in the Region. But this came after years of decline where Denmark had registered below par productivity growth. The country is now back at the level of labor productivity registered in 2004/2005.

Labor mobilization in the Baltic Sea Region, measured by annual hours worked per capita, has stabilized in 2010. While the Asian tigers, Oceania, and in Europe the core Euro-Zone countries (Euro-Zone excluding Portugal, Ireland, Greece, and Spain) reported improvements in labor mobilization, all other regions covered saw this measure slip further. Still, the Baltic Sea Region remains



Note: Russia data estimated at 2000 hours per employee and year
Source: Groningen Growth and Development Centre and The Conference Board (2011), authors' calculations

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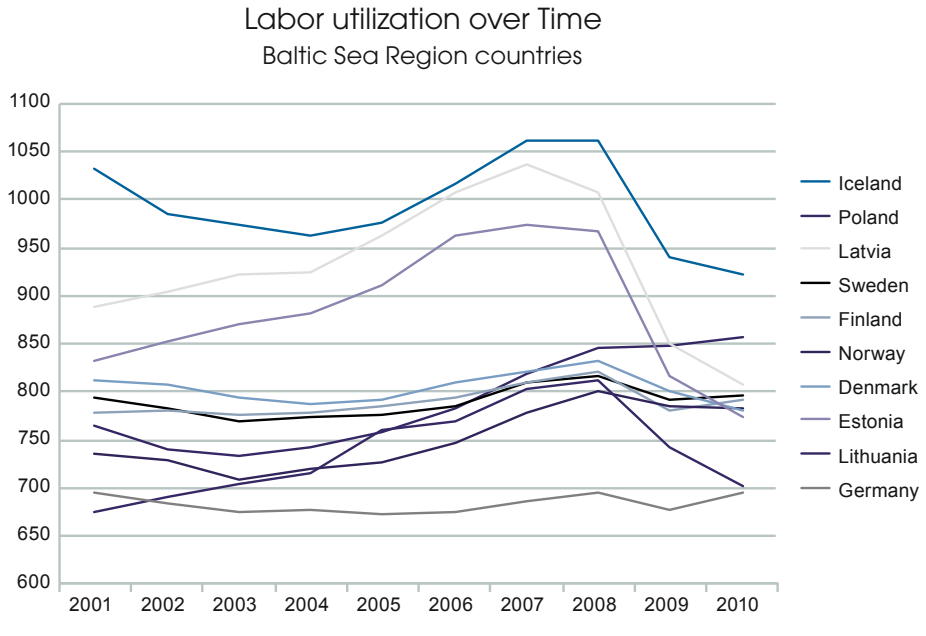

Source: Groningen Growth and Development Centre and The Conference Board (2011),

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far from the trend growth in labor mobilization that had been evident until 2008. While there had been a clear difference in labor mobilization growth across regions before 2008, the performance since then has followed a stronger common trend.

Within the Baltic Sea Region, the Baltic countries, Denmark, and Iceland experienced significant reductions in labor mobilization in 2010, albeit not as dramatic as in 2009. The rest of the Region registered moderate growth of labor mobilization, with Germany being the most dynamic performer.

Labor mobilization is affected by a number of structural factors, from demographics to labor market conditions to the type of employment contracts most prevalent. On all of these there are significant differences across the Baltic Sea Region, indicating a heterogeneous set of challenges at the country level.

The share of working age population in the total population is for most countries in the Region close to the EU average of 67%. The ratio is somewhat lower for Denmark and Sweden and higher for Poland. The demographic outlook differs more significantly: Iceland, Denmark, Norway, Finland, and Sweden have a high share of young people in the population. In these countries, the entry rates into the labor force will be solid, while the other countries in the Region face a shrinking labor force. This will increase the pressure on the social security systems. Germany has already a higher share of older inhabitants than most of the EU.

On labor markets, Denmark, Sweden, Iceland, and Norway benefit from high female labor market participation. The Baltics and Germany are slightly below the EU average on this measure; Poland is far behind. With the exception of Poland, the Region does overall well on the labor market participation of older workers. Youth unemployment, however, is high in Finland, Sweden, Poland, and the Baltics, but not in Germany, Denmark, and Norway. And rates of early retirement and disability pensions are traditionally high in Denmark, Norway, and Sweden. Countries with high inflows of immigrants, Sweden in particular, have struggled to integrate them into the labor force.

Looking at employment relations, part-time employment rates are high in Sweden, Norway, Germany, and Denmark, but low in the rest of the Region. Norway registers a surprisingly high loss of working time due to employee sickness, above EU and also the already high Nordic levels. Sweden has seen some improvement on this measure in response to changes in sick leave regulations.

Assessment

The Baltic Sea Region has in 2010 experienced a remarkably strong recovery after the deep crisis of 2009. Some, but not all, of the losses incurred that year have been recovered. Among prosperous countries in the Region, those hit harder in 2009 tended to do better in 2010. Among the less prosperous, the relation was much less clear.

The Region had in 2009 reacted to the global demand shock through a combination of lower productivity and lower labor mobilization. The resumption of growth in 2010 has mainly resulted in an increase of labor productivity, while labor mobilization has stabilized at the lower post-crisis level. In some countries in the Region, companies have already started to hire again in 2010, in others more recent data suggests that this has started to happen in 2011.

While the cyclical dynamics in the wake of the crisis dominate the short-term changes in prosperity outcomes, the competitiveness analysis has to focus on the longer-term trends. The main focus is labor productivity, where medium term growth rates have been solid, but the level remains almost 20% below the EU-27 average. On labor mobilization the profile is already strong for the Region as a whole, but country-specific challenges will need to be tackled.

2.2 Intermediate indicators of economic activity

Prosperity is created when competitiveness fundamentals give rise to economic activities that ultimately result in wealth. This section includes an analysis of five groups of intermediate indicators of economic activity to gain insights into the underlying competitiveness of the location. As in previous years, the Report looks at indicators of trade, domestic and foreign investment, and innovation. A new perspective is added through a discussion of macroeconomic imbalances and the structural composition of the Baltic Sea Region economy.

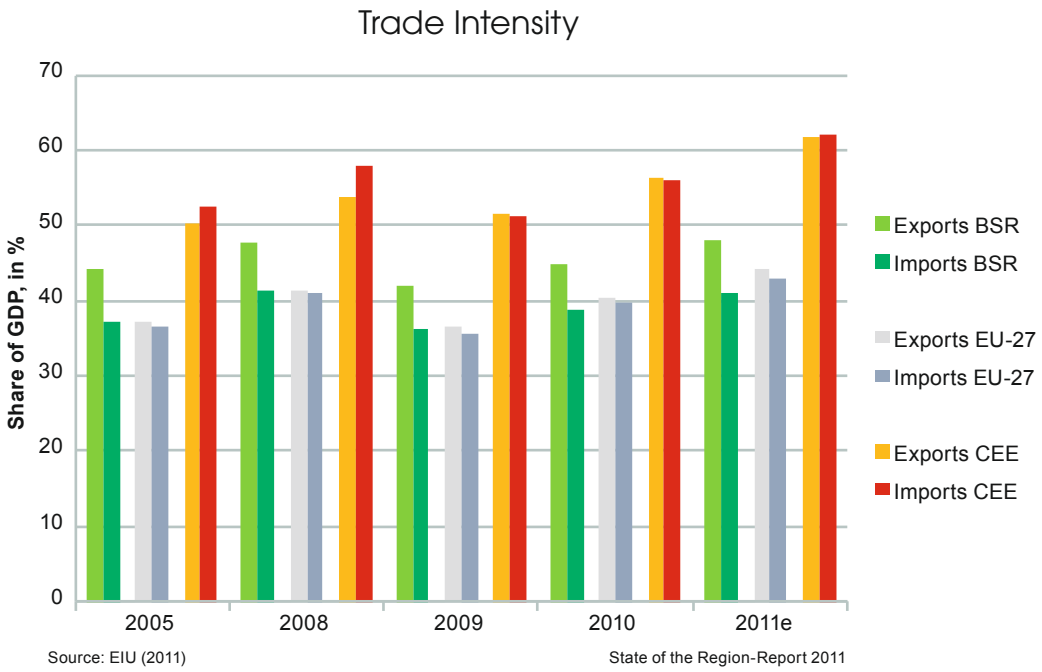
Trade

The Baltic Sea Region, dominated by small open economies, continues to register a solid level of trade intensity (the ratio of exports and import values relative to GDP), marginally higher than the EU-27. Total trade is expected to reach almost 90% of GDP in 2011, more than 11%-points higher than during the crisis in 2009. The central European countries are significantly more trade-oriented, but are also composed by on average even smaller economies.

Total exports of the Region in 2010 reached close to $900bn, with one quarter accounted by services and three quarter by goods. The total value of exports (measured in current US-$) was up 11% in 2010, following the 25% contraction in 2009 and annual growth rates between 10% and 20% for the last few years before the crisis. Goods exports had suffered disproportionally in 2009 and grew by 14% in 2010, recouping about 35% of the reduction in the year before. For services, the drop had been smaller, but the rebound was at only 20% also lower.

While Baltic Sea Region exports grew solidly in 2010, world exports grew even stronger. Total world trade went up by close to 20%, regaining 75% of the 2009 losses. As a result, the Baltic Sea Region continued to lose market share at pretty much the same rate as during the crisis in 2009. This dramatic drop of Baltic Sea Region market shares over the last two years erodes all gains made in the previous decade. This is similar to the overall loss of world export market share by European countries. North America has in the meantime been able to stabilize its market position since 2008. China as well as the ASEAN countries have gained share.

In terms of individual countries across the Baltic Sea Region, Russia registered the highest



Source: EIU (2011) State of the Region-Report 2011

export growth rate at close to 30%, followed by Lithuania and Estonia. Because of the collapse of Russian exports in 2009, the country's 2010 export value is still only 85% of its 2008 level. Finland (73%), Norway (79%), and Denmark (82%) remain even further below their pre-crisis export levels. Despite the overall resumption of trade, Finland and Latvia registered a reduction in service export values in 2010; goods exports values increased throughout the Region. Iceland and Poland had suffered the smallest reduction in exports during the crises, and are now within 10% of their 2008 export levels.

An important aspect of the recent resumption of growth has been the increase in diversification, i.e. the breadth of products and services sold abroad, by the Baltic countries. This could be a sign of increasing export quality.

Foreign Direct Investment

Foreign direct investment (FDI) is an increasingly important way through which the Baltic Sea Region participates in the global economy. FDI intensity (inward and outward FDI stocks relative to GDP) is now at roughly 100%, up by more than 20%-points relative to 2008 and 40%-points relative to the beginning of this decade. FDI intensity is now higher than trade intensity; the only other time this was the case was in 2007.

While there was a huge increase in outward and inward FDI intensity in 2009, the situation normalized significantly in 2010. As GDP in the Region grew strongly and most currencies in the Region appreciated, the ratio of FDI stocks abroad relative to domestic GDP dropped by 3%-points. Trends in the European Union and NAFTA were broadly similar. Differences in relative GDP growth and currency dynamics drove NAFTA[3] FDI intensity to continue to rise in 2010. EU FDI intensity developed weaker for inward and stronger for outward FDI stocks.

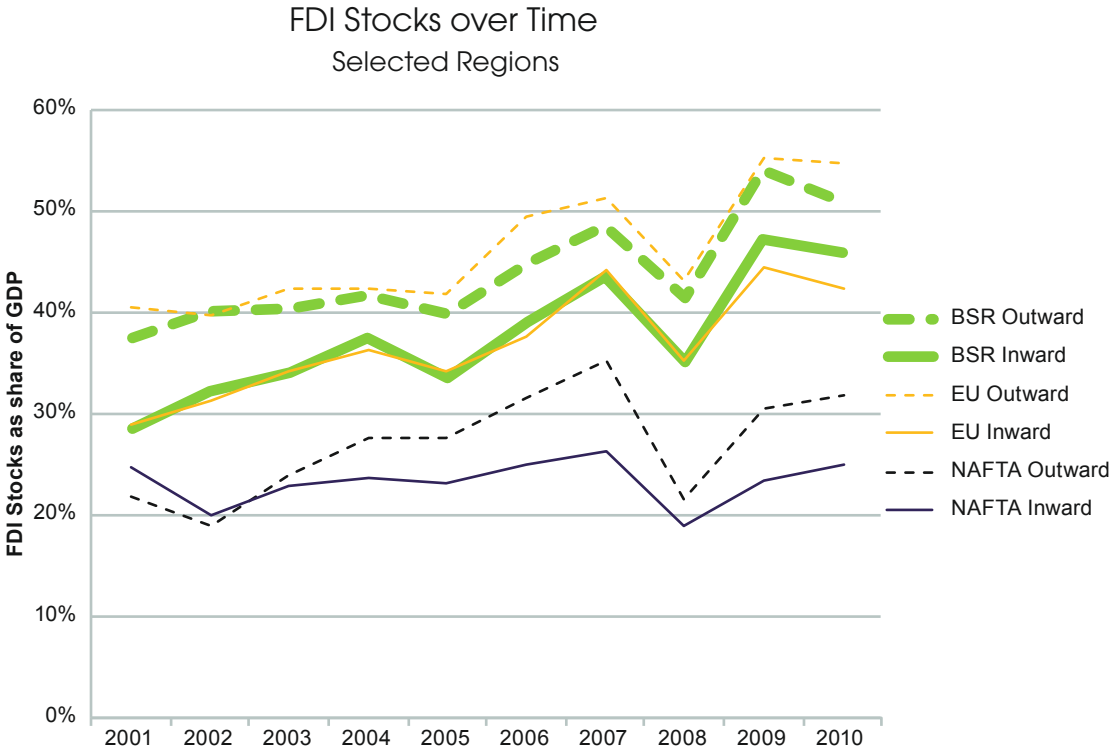
3 NAFTA FDI stocks for 2008 were significantly revised relative to the data published in the 2010 State of the Region-Report. US companies repatriated large sums of repatriated profits during the crisis to shore up balance sheets. The same happened with foreign, especially European, companies pulling back capital from the US.

Box: Measuring FDI

Investment flows are largely captured through their impact on a country's current account, i.e. when a company from country A is exchanging domestic funds into foreign currency to buy assets in country B. The current account also captures the repatriation of profits from a subsidiary in country B to headquarters in country A. But it does not track acquisitions in country B financed on the local capital market, or changes in the value of a foreign-owned company due to, for example, retained earnings. Investment stocks should, in principle, take account of these changes. But this is complex and implemented in different ways across countries.

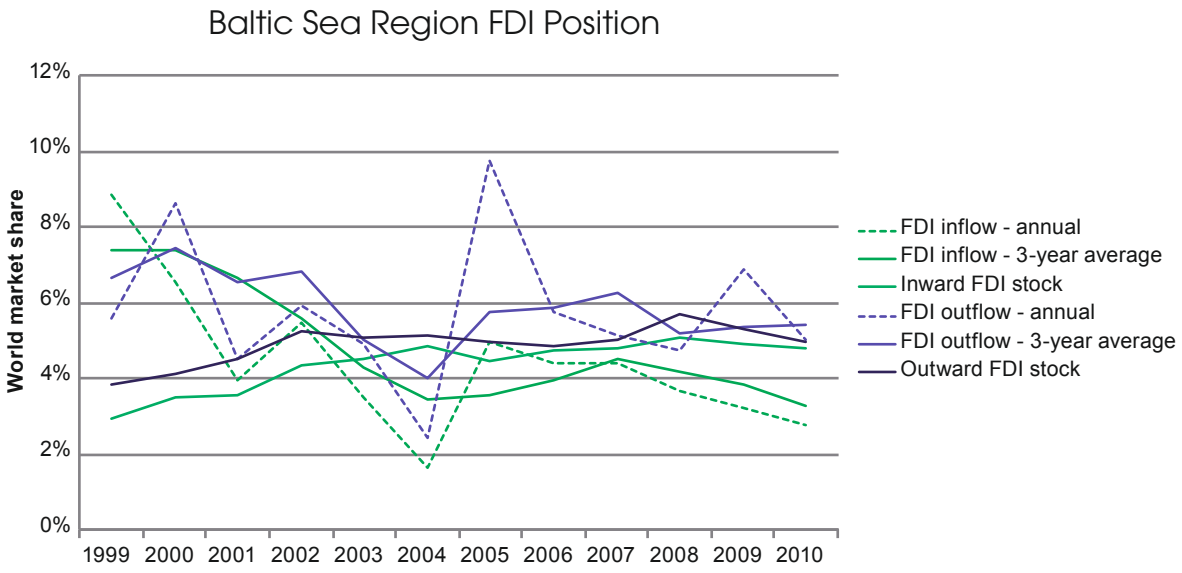
FDI stocks and flows are traditionally measured in US-Dollar terms. In periods of significant exchange rate changes, this can significantly affect the ratio of outward FDI (in USD) versus domestic GDP (in local currency).

The complexities in tracking FDI lead to systematic differences in the world stocks of inward and outward FDI, two measures that should be identical. This explains why the Baltic Sea Region's ratio of outward to inward measures is at 1.11 when looked at relative to GDP, but only at 1.04 when looked at relative to world market shares.



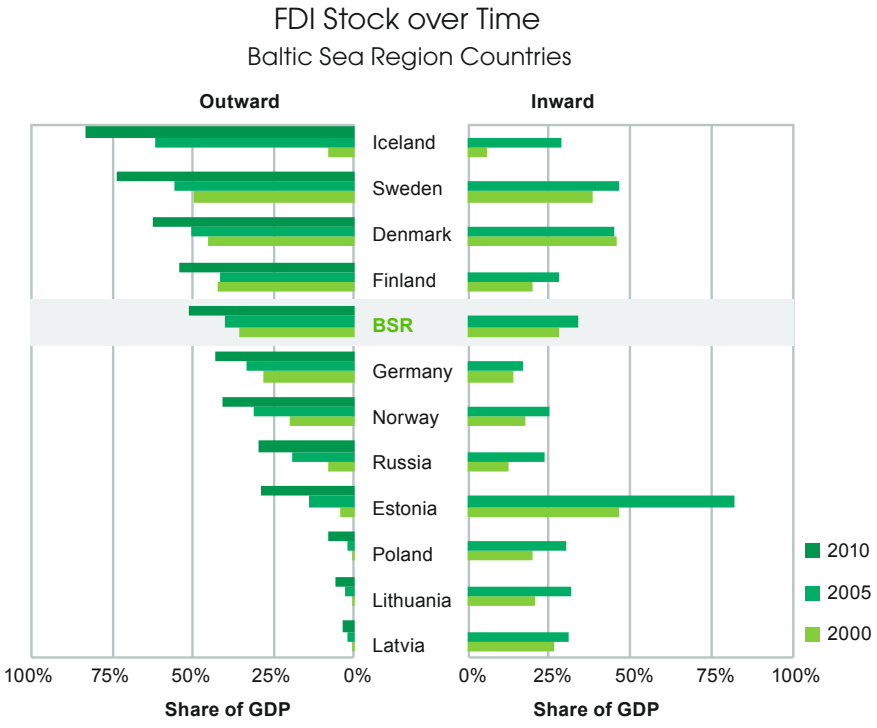
Source: UNCTAD (2011), IMF (2011), author's analysis. State of the Region-Report 2011

In terms of global market shares of FDI, the picture looks slightly different. The Baltic Sea Region has lost some relative ground on both inward and outward FDI. For inward FDI stocks, its global market share dropped from 5.1% in 2008 to 4.8% in 2010. The data on inward flows is even more negative, which suggests that foreign companies already present in the Baltic Sea Region are more active in investing than new entrants. For outward FDI stocks, the drop was even more pronounced from 5.7% to 5.0%. With the flow data slightly more positive, this could indicate that companies in the Baltic Sea Region already active abroad had to accept losses, while new investors from the Region continued to build up a foreign presence.



Source: UNCTAD (2011), author's analysis. State of the Region-Report 2011

Among Baltic Sea Region countries, there are three distinct patterns of FDI activity: Poland and the three Baltic countries remain largely active as destinations for inward FDI. All four countries register increasing outward FDI as well, especially Estonia. But in none of them does outward FDI reach more than a third of inward FDI. In Iceland, Norway, Russia, and Sweden inward and outward FDI are roughly balanced. In Iceland foreign debtors have seized ownership of a significant number of Icelandic companies that were pushed into default during the crisis, including those that had a large presence abroad. For Russia, it is instead a sign of the strong growth in outward FDI as Russian companies have internationalized and capital flight has increased over the last few years. Denmark, Finland, and Germany have foreign FDI stakes, which are significantly larger than the inward FDI that they have attracted. For Denmark, this is a more recent trend as outward FDI continued to develop at a robust rate while inward FDI has only kept pace with the growth of the Danish economy.

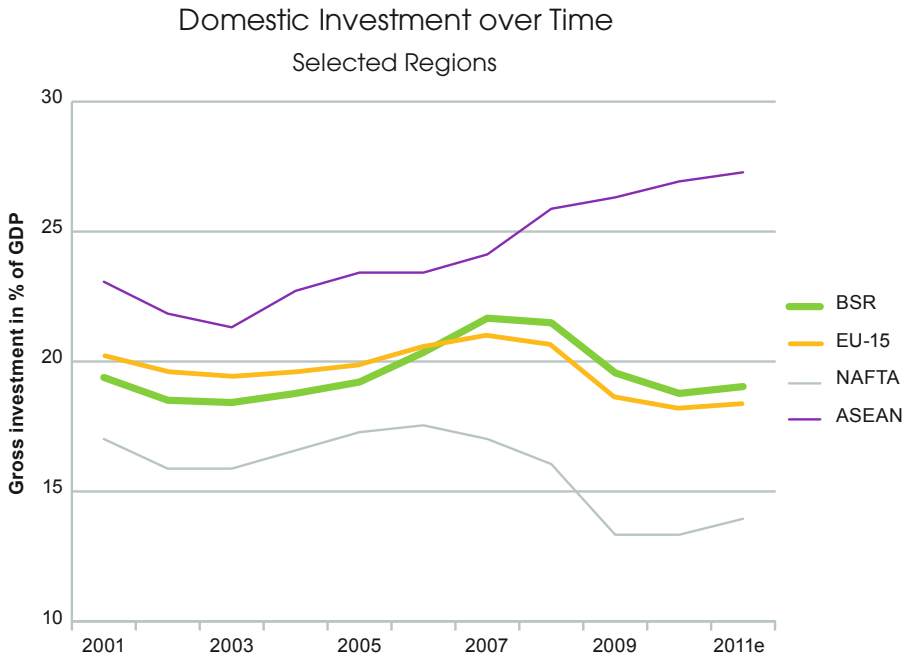


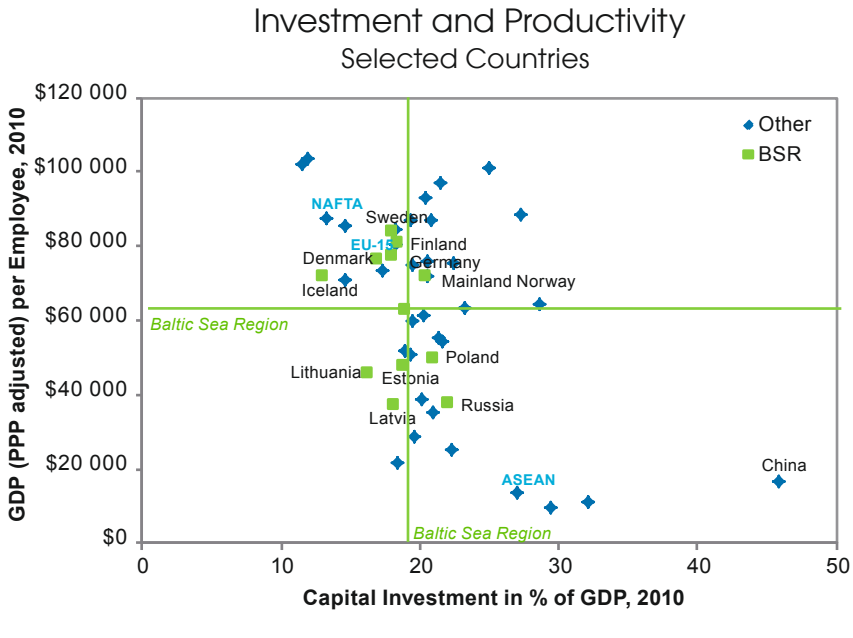
Source: UNCTAD (2011), author's analysis. State of the Region-Report 2011

Domestic Investment

Upgrading of the capital stock is an important way to improve productivity. Higher capital intensity is one important factor, the changes in technology and operational practices driven by new equipment are another. The share of capital investments tends to be high when countries still have a relatively modest capital stock, but have created conditions in their economies where the profitability of adding new equipment is high.

The Baltic Sea Region rate has for many years had an investment rate below the level of the EU-15. This was despite a lower GDP per capita level that signaled the potential for catch-up driven by increasing capital intensity. Since 2006, however, the Region's investment rate has surpassed its advanced European peers, if only by a small margin.





Against earlier predictions this remained the case in 2010 when Baltic Sea Region investment was more stable than expected.

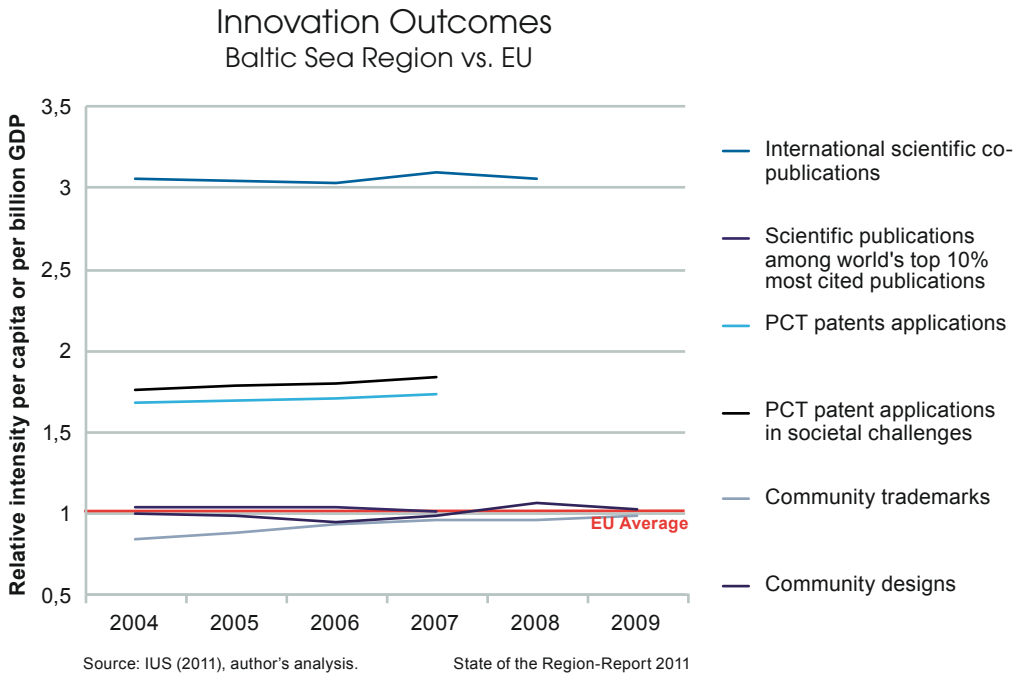
Among Baltic Sea Region countries, Russia, Poland, and Norway registered the highest investment rates in 2010, all above 20% of GDP. Iceland, Lithuania, and Denmark registered the lowest investment rates; Latvia, Estonia, and Norway the largest drop from 2009 to 2010. While the Baltic countries and Iceland are far below their average investment rates over the last decade, the other countries in the Region are currently close to historical averages. Given the level of capital intensity implied in current labor productivity, particularly Russia and Poland would be expected to register a significantly higher investment rate.

An important aspect for evaluating investment intensity is the type of investment financed. For the Baltic countries, a lot of the investment prior to the crisis went into speculative real estate. This investment made only a limited contribution to expanding the productive capital stock of their economies.

Innovation

Creating new products, services, and ways to provide them to consumers is critical for future value generation, increasingly so as countries become more prosperous and move closer to the global knowledge frontier. Innovation, on which productivity growth is based, stretches from academic invention to new patents and indicators of new types of business activity. While many of the indicators used to track innovation are biased towards academic research, they still contribute to the understanding of the competitiveness profile of a location.

The EU's Innovation Union Scoreboard aims to provide a broad sense of innovation outcomes. The Baltic Sea Region (excluding Russia, which is not covered by this source) continues to rank as an innovation leader compared to its European peers. The Region particularly excels in international scientific collaboration, to a large degree a reflection of the relatively small countries that dominate the Region. Its clear advantage is in areas of scientific research and patenting intensity, while it only matches the EU average in the level of trademarks and designs relative to GDP. This data is in line with a view held in the Nordic countries and Germany - that strong scientific capability is not sufficiently reflected in economic outcomes. Whether this is true or an artifact of the indicators used remains in dispute. Interestingly, firm-level R&D activity is high, indicating that the challenge is not so much in the linkages between academia and companies, but in the ability of turning R&D, whether public or private, into other types of economic activity. There is evidence from the Nordic countries that development activities are



Source: IUS (2011), author's analysis. State of the Region-Report 2011

increasingly moved to larger markets elsewhere.[4] At the same time, the share of domestic research and development under foreign control has increased (see Box). These trends could put further strains on the ability of Nordic countries' innovation systems to translate research excellence and firm-level R&D into broader wealth creation in the Region.

Across the Baltic Sea Region countries, Denmark ranks among the top three countries on all indicators measured. Germany (on trademarks), Iceland (on public-private co-publications), and Sweden (on patents) lead in one category each, with solid performance in the other areas. Estonia leads the Baltic countries and Poland by a large margin on science-related outcomes. On market-related indicators, however, Poland matches the Estonian position.

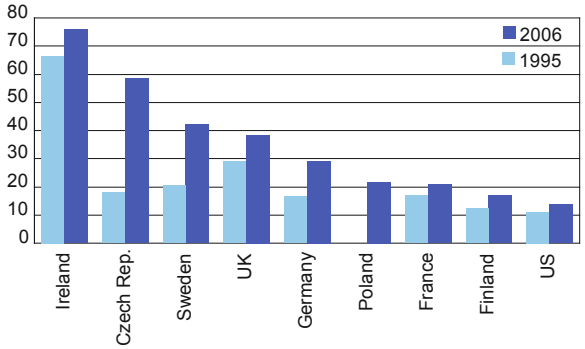
Box: Rapid Internationalisation of R&D: Facts and Figures for the Baltic Sea Region
From EIB

The internationalisation of production and firm ownership is being more and more matched by a similar internationalisation of research and development (R&D). The share of foreign affiliates in total business R&D has increased and currently lies between 20% and 40% in the large EU countries and well above 50% in a number of smaller Member States. Internationalisation of R&D is expected to continue, with an increasing share of new R&D facilities likely to be set up in China and India. Yet, where exactly a multinational enterprise (MNE) sets up new R&D centers depends on the main motives to go international, and these motives are changing. This box insert presents some facts and figures on R&D internationalisation, focusing on the countries of the Baltic Sea Region and comparing them to their peers elsewhere.[5] It also discusses the main motives and the specific location factors underlying R&D offshoring. It then sketches the economic effects of R&D internationalisation. Finally, it describes how national governments in the Baltic Sea Region are responding to the internationalisation of R&D and innovation.

R&D internationalisation is expanding fast. Real R&D expenditures under foreign control have typically outgrown R&D controlled by firms of the reporting country. The total amount of foreign-controlled R&D expenditures in all OECD countries with available data rose from USD 37bn in the mid-1990s to USD 84bn in the mid-2000s. The average annual growth rate was at least 5% in all countries. Sweden and Germany were among the EU countries where foreign-controlled R&D grew the fastest (by 17% and 14% per year on average respectively). As a result, the share of foreign affiliates in total business R&D expenditure has increased in many OECD countries (see chart below[6]). The share more than doubled in Sweden and even tripled in the Czech Republic. It is as high as 75% in Ireland and around 60% in the Czech Republic. By comparison, it is about 20% in Poland.

Emerging economies are increasingly attractive as recipients of international R&D flows. While hard data on international R&D expenditures outside the OECD are scattered, the UNCTAD in their survey of top global R&D-performing MNEs observes a clear trend towards locating more R&D activities in developing economies, especially in Asia, even though the bulk of foreign R&D is still spent in the developed world.[7]

The share of foreign affiliates in total business R&D has been expanding



The motives of R&D offshoring are changing – as are the factors of R&D location. The main motives of R&D offshoring have been shifting from market-seeking

4 Nordic Council of Ministers: Nordic Globalization Barometer 2010.

5 For a discussion of the Nordic countries see chapter 3 in the Nordic Globalization Barometer 2010, available at www.norden.org.

6 See De Backer and Basri (2008), "The internationalisation of R&D", in OECD (2008), Staying competitive in the global economy, pp. 219-248.

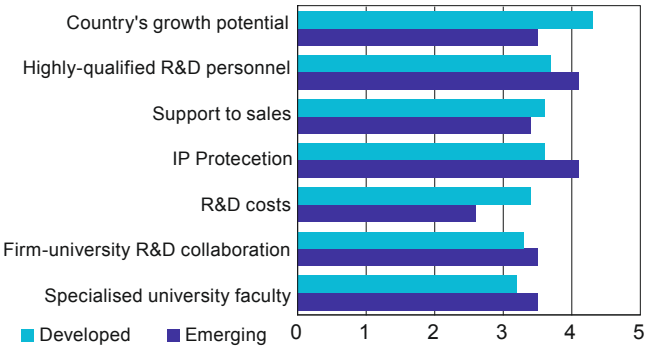
7 UNCTAD (2005), World Investment Report.

to technology-seeking considerations.[8] Market-seeking R&D offshoring is when MNEs do some incremental development and engineering in the host market to adapt products to the preferences of foreign consumers or to host-country regulations. Technology-seeking R&D offshoring is when MNEs' R&D affiliates from all over the world co-locate in a specific geographic area (e.g. Silicon Valley) at the cutting edge of a technology in order to develop new products for the world market. By contrast, a less-often cited motive has been cost efficiency. It may play some role for MNEs setting up R&D affiliates in emerging economies. R&D offshoring does not come for free as performing R&D in different countries involves transaction costs, the loss of economies of scale and scope, and a risk of redundant innovation projects inside the firm. Moreover, choosing the optimal location for a foreign R&D affiliate is a complex decision that requires careful weighing of specific location factors. The critical location factors depend on the main motive for R&D offshoring.

As shown in the chart above,[9] firm surveys point to the host country's growth potential as the single most important location factor underlying R&D offshoring to

R&D location factors

Average score on a scale from 1 (not important) to 5 (very important)



emerging countries, which appears still to be driven more by market-seeking than technology-seeking motives. Second come factors such as the availability of qualified R&D personnel and R&D costs. By contrast, for MNEs offshoring R&D to other developed countries, the availability of highly-qualified R&D personnel and strong IP protection are key. China is becoming an attractive R&D location for global MNEs, because the country ranks high on the location factors of market-seeking and technology-seeking R&D, the exception being the protection of intellectual property rights.

The increasing focus on technology-seeking motives in international R&D has sparked fears among policy makers in Europe. Foreign MNEs might diminish domestic technology and production bases while keeping the core of their innovative activities in their home countries. R&D outflows could lead to fewer R&D being undertaken at home and new technology being exported before benefitting domestic manufacturers. However, recent research on foreign takeovers of Swedish companies finds positive effects on their domestic R&D activity.[10] Four out of five location decisions were made to expand the firm's R&D activity rather than relocating it. Two new studies[11] find compelling evidence that the firms involved benefit from R&D offshoring. An international R&D presence increases the likelihood to introduce new products and the share of innovative products in total turnover. Firms having both domestic and foreign R&D locations achieve significantly higher profit margins in subsequent years than others. Companies with R&D operations in two or three foreign countries tend to outperform both companies with higher and lower degrees of R&D internationalization. R&D internationalization is good for the firm up to the limit of what it can manage.

With the increasingly global and technology-seeking nature of MNE's R&D location decisions, national governments lose control over domestic R&D. The governments in the Baltic Sea Region have been embracing the internationalisation of R&D by enacting or stepping up efforts to link domestic firms to foreign sources of knowledge; attract R&D-intensive foreign firms; and support the internationalisation of public research institutions.[12] While Denmark has concentrated on helping domestic firms to access foreign sources of innovation, Germany, Finland, and Poland have implemented or enhanced R&D tax credits to attract additional foreign investment. While some form of direct financial support and the provision of public R&D infrastructure exist in most countries, Finland and Sweden have recently pioneered into opening public procurement of R&D and innovation.

8 See e.g. De Backer and Basri (2008), "The internationalisation of R&D", in OECD (2008), Staying competitive in the global economy, pp. 219-248.
9 J. Thursby and M. Thursby (2006), "Here or there? A survey of factors in multinational R&D location", Washington, D.C. See also Cincera et al. (2010), "Drivers and policies for increasing international R&D activities for EU MNEs", IPTS Working Paper on corporate R&D and innovation 2010/2.
10 Bandick et al. (2010), "Foreign acquisitions, domestic multinationals, and R&D", Kiel Working Paper No. 1651.
11 Peters and Schmiele (2010), "The influence of international dispersed vs. home-based R&D on innovation performance", ZEW Mannheim Discussion Paper No. 2010/102; and Peters and Schmiele (2011), "The contribution of international R&D to firm profitability", ZEW Mannheim Discussion Paper No. 2011/005.
12 See OECD Science, Technology and Industry Outlook 2010, Paris, pp. 128-132.

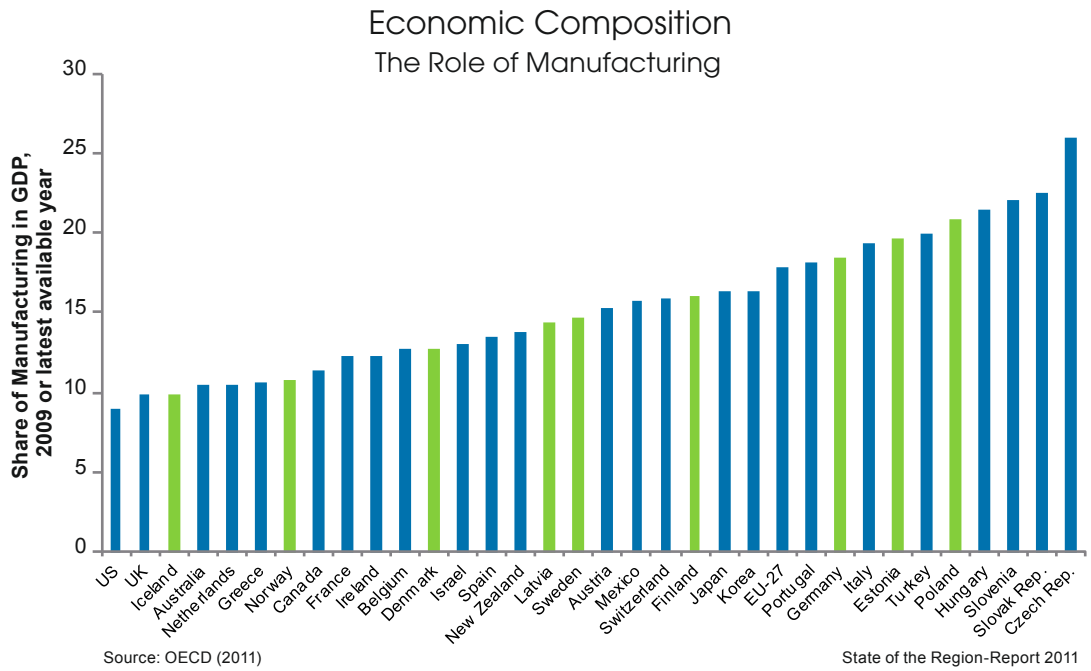
Structural composition

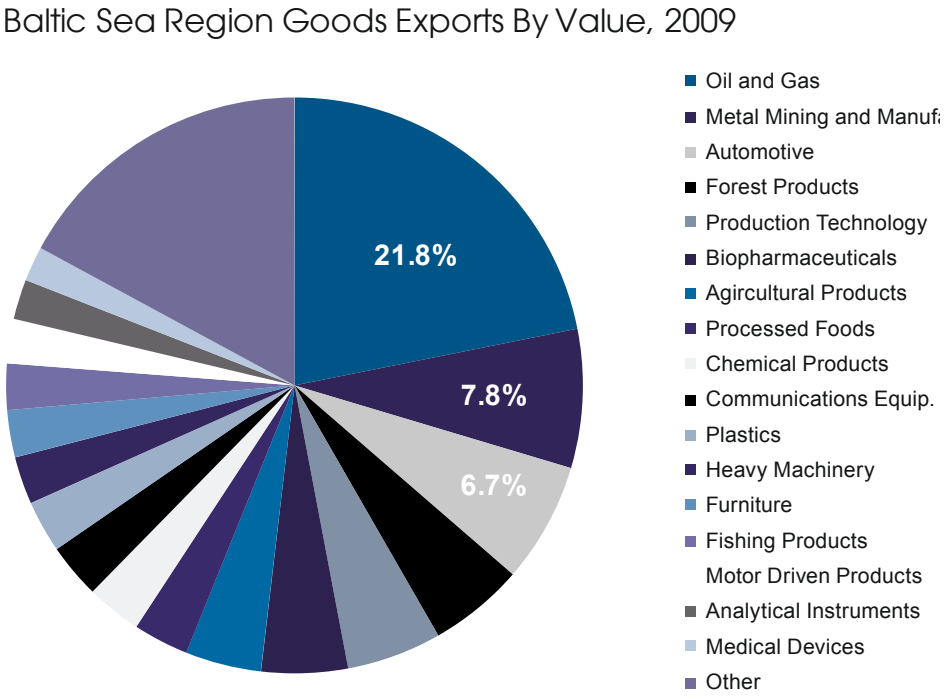
While indicators of innovation aim to look into the future, indicators of structural composition provide a perspective of the cumulative impact of the past. The sectorial composition of the economy and its economic geography provide insights into the underlying competitiveness trends of the past, influence the economic outcomes of today, and shape the path-dependent steps that the economy will be able to take tomorrow.

There is significant variety in the composition of national economies across the Region. Agriculture remains important in Poland, and accounts still for around 5% of GDP in Russia and the Baltic countries. The service sector is largest in Iceland at 95%, followed at a significant distance by Latvia, Denmark, and Sweden. The industry share is highest in Norway, Lithuania, and Finland; manufacturing (which is included in the industry category) registers the highest GDP share in Poland, Estonia, Germany, and Finland.

Oil and gas exports account for more than 20% of the Region's exports, by far the single largest export category. Metal mining and manufacturing (which includes iron ore from Sweden), forest products, production technology, and biopharmaceuticals are the next important export categories in which the Baltic Sea Region has a revealed comparative advantage. Automotive is in this group by value, but in this cluster the Region's world market share is lower than its total goods export market share.

Over the last decade, Baltic Sea Region export growth has been below the global level in 20 out of 36 cluster categories, and in 7 out of the largest 10 cluster categories by value. The strong growth in automotive sector is an artifact of strong German exports that are, however, largely unrelated to Northern Germany. Smaller, but for the Region more meaningful, export advantages were registered in agricultural foods and production technology. The largest growth deficit relative to the world market was in communications equipment, biopharmaceutical products, oil products and metal mining and manufacturing. The Baltic Sea Region would have a 20% higher global export market share today, if it would have been able to grow exports at the world rate in each cluster category, starting with the export portfolio of 1999.





Source: ISC (2011)

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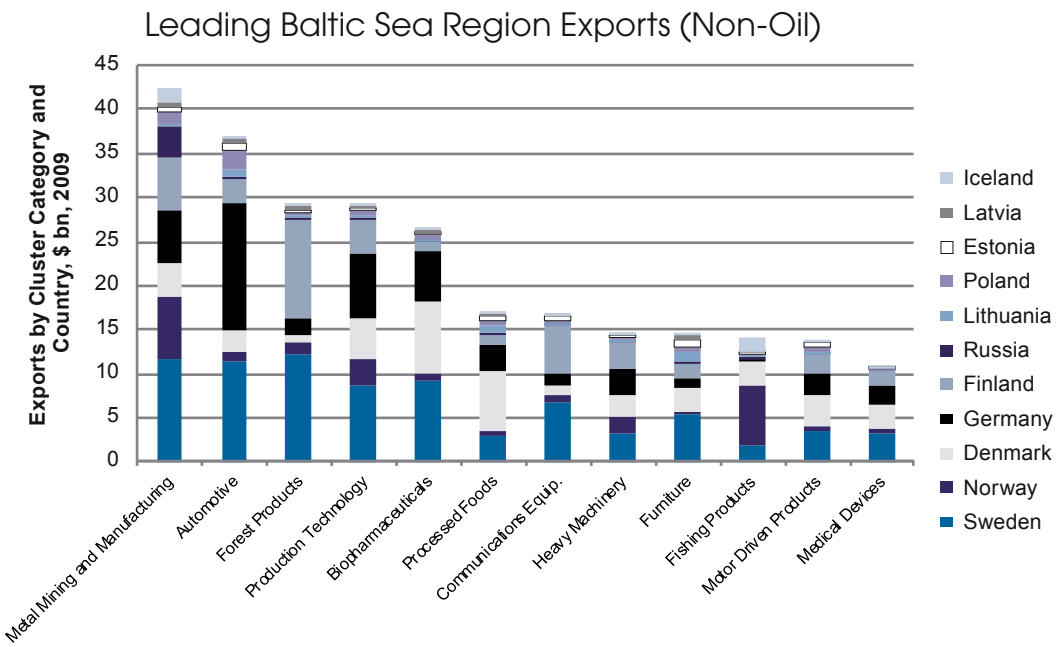

Note: Only cluster categories with more than $10bn exports, oil and gas exports are excluded
Source : ISC (2011)

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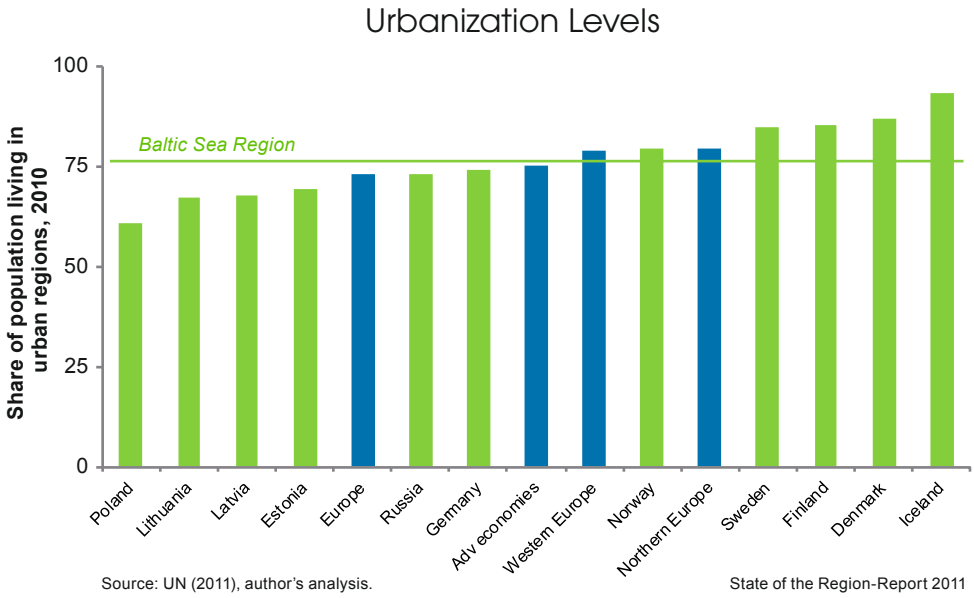
In terms of economic geography, the Baltic Sea Region's urbanization level is close to the European average. This might come as a surprise, given the low average population density across the Region. But countries like Finland, Sweden, and – at a smaller scale – Iceland have most of their population concentrated around a few urban centers, with much of country-side only sparsely populated. Across the Region, there is a clear correlation between urbanization and prosperity: the Baltic countries and Poland have relatively larger shares of their population in rural regions than



their Nordic and Western peers. Russia's north western region has much of its population concentrated in the large St. Petersburg metropolitan area, but lacks overall medium-sized urban areas.

Assessment

With the immediate impact of the global economic crisis receding, the data on intermediate indicators reveals insights into the structural factors that are affecting the Baltic Sea Region.

The Baltic Sea Region is highly integrated into the global economy. As a mode of internationalization, FDI is becoming increasingly important relative to trade. This puts some of the loss in export market share into perspective: it is a reflection of companies from the Baltic Sea Region shifting from exports to FDI. This shift is driven by a broader-based assessment of the relative benefits of these two modes of internationalization by these companies, not simply a result of lower competitiveness in the Baltic Sea Region. The overall still solid FDI inflows registered by countries in the Region indicate the benefits that such a shift can have.

Companies in the Baltic Sea Region invest relatively to their peers in other regions more in R&D than in capital formation. In part, this is consistent with other advanced economies and a reflection of the high capital stock that already exists in the Region. In other parts, however, it might be a reflection of barriers in the business environments across the Region; even countries with lower productivity and likely a lower capital stock register relatively weak capital investment.

In terms of innovation, the data indicates that the Region is highly internationalized in research and provides solid research-oriented human resources. Despite generally strong linkages between academia and the business sector, and strong firm level R&D activity, however, economic outcomes are not fully reflective of these strengths. A key challenge, as also the contribution from EIB points out, is how to position the Region within the global innovation system.

Patterns of sectorial composition and economic geography are heterogeneous across the Region. They are likely to explain some of the performance differences within the Region.

2.3 Competitiveness fundamentals

Prosperity outcomes and the economic activity measured by intermediate indicators are ultimately driven by the competitiveness fundamentals in an economy. The complex mix of fundamentals can be organized in two broad categories: macroeconomic and microeconomic factors. Macroeconomic factors set the general context for firms, but do not affect productivity and innovation directly. This group includes both the quality of social and political institutions and the quality of macroeconomic policy. Microeconomic factors have a direct impact on the productivity with which companies can transform inputs into economic value. This group includes the quality of the business environment, the presence and dynamism of clusters, and the sophistication of companies.

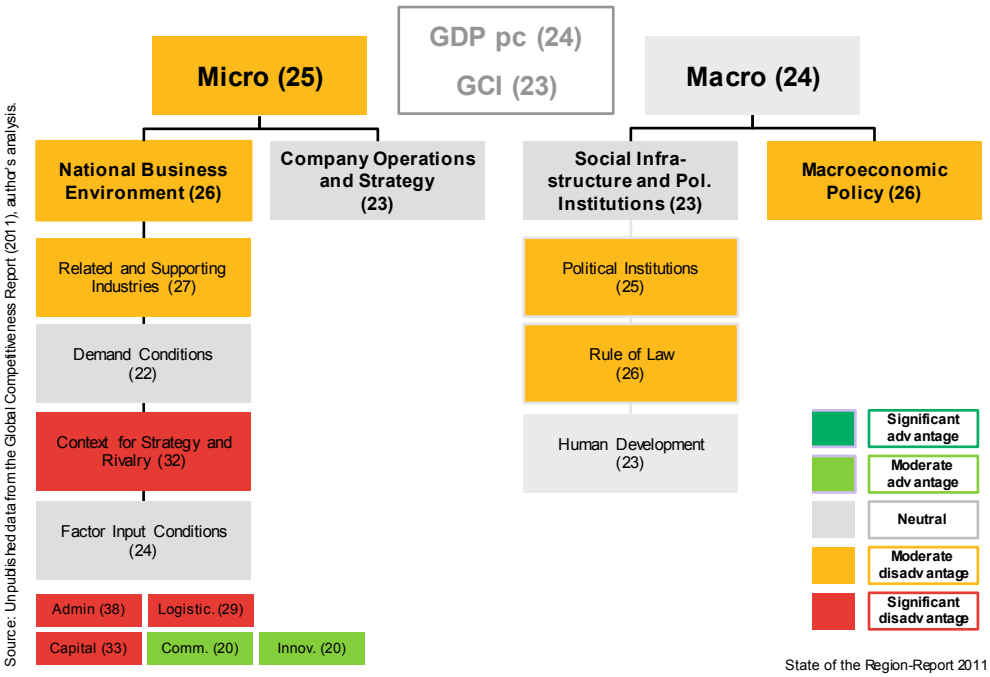
Overview

The Baltic Sea Region remains a highly competitive part of the European economy. Changes over the last two years have been modest, with a slight decrease in both 2010 and 2011. The reduction in 2010 was most visible for Iceland, Latvia, and Poland; Norway and Russia managed to gain position. In 2011, Latvia was the country with the highest move, gaining six ranks, while most other countries in the Region lost one or two ranks.

The Baltic Sea Region registers overall a balance between levels of prosperity and levels of competitiveness. This indicates that the current outcomes are well supported by existing fundamentals. Future growth dynamics will require improving these fundamentals further.

Within the Region, Estonia, Denmark, Finland, Sweden, and Germany should be able to reach higher levels of prosperity given their average level of competitiveness. This could signal the presence of binding constraints in some more narrow areas of competitiveness, holding back the potential of other strengths. The opposite pattern is visible in Iceland, Latvia, Lithuania, and Russia. For Russia, and some degree Iceland, the presence of endowments, especially natural resources, might be able to support the current level of prosperity not 'earned' given the level of competitiveness achieved so far. For Latvia and Lithuania, either sentiments are too pessimistic in the aftermath of the crisis, or the adjustment will have to continue to align prosperity and competitiveness levels.

The Baltic Sea Region's Competitiveness Profile 2011



State of the Region-Report 2011

The Region also has a relatively balanced portfolio of strengths and weaknesses. The only areas with more significant problems are the context for strategy and rivalry, and some dimensions of factor input conditions.

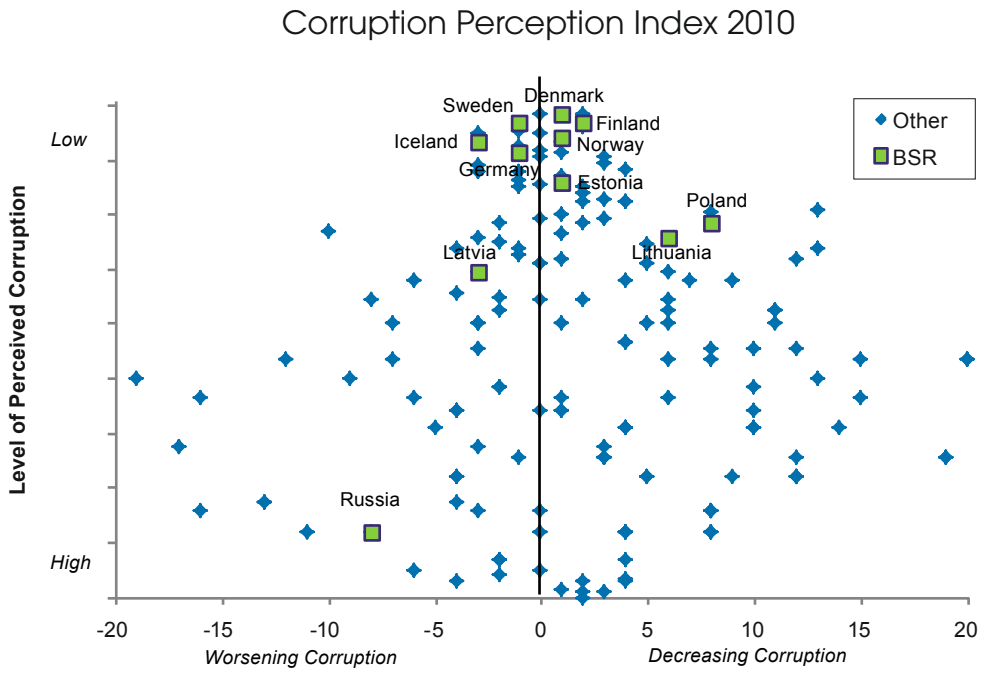
This overall profile hides the important differences that exist across countries in the Region. Sweden, the most competitive economy in the Region overall, has strengths across the board. Denmark, Finland, Norway, and Poland are all strongest on macroeconomic policy, followed by institutional factors and then the aggregate of microeconomic fundamentals. Germany and Lithuania register the opposite pattern, with distinct relative advantages in microeconomic competitiveness. Estonia benefits most from its strong institutions; Russia suffers from its weak institutional structures.

Macroeconomic competitiveness: Institutions

The Baltic Sea Region gets traditionally solid marks on the quality of its institutional structures. It ranks strongest on the basic health and educational services that public institutions provide. This is particularly important where income inequality is high and these services are critical to enable poorer segments of society to participate in the economy.

The Region ranks a bit lower on political institutions, but has registered some improvements in this area. Business leaders around the Region might have given credit to the ability of governments to mount a strong response to the crisis. Country-specific differences are, however, large. Russia and Latvia register low on this category; Russia despite some gains over time, Latvia after a big drop in perceived quality that is only slowly coming to a halt. Lithuania is somewhat better ranked and has stopped the post-crisis fall in rank. Poland has significantly gained position and now ranks around 50 globally. All other countries in the Region rank relatively high and stable, with four countries in the top 10 and two countries (Estonia, Iceland) just shy of the top twenty.

The rule of law shows a similar pattern of solid and stable overall performance for the Region in aggregate but significant challenges in individual countries. Russia ranks far behind the rest of the Region; on a narrow measure of perceived corruption, it has further lost position. Latvia, Lithuania, and Poland rank between ranks 50 and 60. While



Source: Corruption Perception Index (2010)

Lithuania and Poland slowly gain position, Latvia has recently been losing rank. Consistent with this, Latvia registers the highest grey economy share of all Baltic Sea Region countries. Estonia leads the Baltic countries at rank 30. All other countries in the Region are within or close to the global top 10.

Overall, institutional quality is a regional asset. Where problems exist, they are driven by country-specific conditions, not by a region-wide challenge. Regional efforts could, however, help to improve institutions, in particular the quality of government administrations, in countries where they continue to be weak. For the EU countries, such programs were in place during the accession period, but have been largely terminated since then.

Macroeconomic competitiveness: Macroeconomic policy

The Baltic Sea Region's track record of solid overall macroeconomic policy has been one of the key assets to build on in its robust response to the global economic crisis. The underlying quality of macroeconomic policy remains hard to capture; the indicators used instead are outcomes driven to a large extent by the forces of the crisis. This is why the Region is not ranked stronger overall.

In monetary policy, inflation rates across the Region have been slightly higher than in the EU-27 or the OECD. The reasons differ: For some countries, monetary policy is driven by exchange rate considerations, with inflation rates a by-product of fiscal policy and the interest in keeping the currency stable. For others, monetary policy has been purposefully accommodating to support fiscal policy in the effort to reduce the impact of the global crisis. As the Region was successful in generating somewhat higher growth than peer regions, part of this monetary policy leniency was reflected in inflation rates.

Underlying monetary policy regimes differ significantly across the Region. Germany, Finland, and since January 1 2011 also Estonia, are part of the Euro-Zone, where the European Central Bank sets monetary policy based on an inflation rate target of "below, but close to, 2% over the medium term." Denmark, Latvia, and Lithuania set monetary policy to keep the exchange rate to the Euro stable, essentially shadowing ECB policy. Iceland, Norway, and Sweden follow different versions of inflation targeting, using slightly different targets and inflation measures. Russia has prior to the crisis targeted exchange rate stability against basket of currencies. More recently the Bank of Russia has shifted towards inflation targeting. Central Banks are independent in all parts of the Region except Iceland. Iceland is also the only country where full convertibility of the currency remains limited in the aftermath of the crisis.

While monetary policy has been successful during the crisis, policy makers in the Region are now facing a dual challenge: In the short-term, they need to evaluate whether the monetary policy tightening that had been planned has to be delayed or reversed as the growth outlook again looks weak. In the long-term, the question remains whether the current multiplicity of monetary policy regimes across the Region is sustainable and can co-exist with open and highly integrated regional markets.

On fiscal policy, the position of the Baltic Sea Region remains overall strong. Public sector deficits and debt levels are moderate compared to other countries. On both indicators, the crisis has left its mark, but the Region has done better than many other economies.

Most countries in the Region have a formal fiscal policy framework to guide medium-term policy planning and anchor expectations about the future course of fiscal policy. The majority of the Nordic and Baltic countries have a target for the average public sector deficit over a business cycle, ranging from -0.5% of GDP in Denmark to +1% in Sweden. Norway aims for a deficit in its budget before returns from its oil fund of no more than 4% of GDP. Russia has a target for spending related to the revenues from oil exports. Germany has recently adopted a constitutional ban for public sector deficits that will become effective first at the federal and then the regional level over the coming years. Poland has set itself an upper limit for public sector debt at 60% of GDP. It also has a short-term target for expenditure growth to be below CPI + 1%.

The developments over the last few months have indicated that fiscal policy sustainability is the result of an often fragile balance between

Macroeconomic Policy Indicators 2010

	Denmark	Estonia	Finland	Germany	Iceland	Latvia	Lithuania	Norway	Poland	Russia	Sweden
Fiscal Policy											
Government budget balance (in % of GDP)	-2.85	0.14	-2.50	-3.28	-7.79	-7.65	-7.12	10.60	-3.15	-4.03	-0.30
Government debt (in % of GDP)	43.40	6.56	48.30	83.40	126.08	44.71	38.66	48.90	52.80	9.00	39.80
Monetary Policy											
Inflation (annual change in %))	2.30	2.98	1.69	1.15	5.40	-1.09	1.27	2.47	2.58	6.85	1.27

	BSR	World	EU-27	OECD	NAFTA
Fiscal Policy					
Government budget balance (in % of GDP)	-0.66	-5.30	-6.20	-6.70	-8.30
Government debt (in % of GDP)	45.28	67.70	79.80	83.80	62.70
Monetary Policy					
Inflation (annual change in %))	2.46	3.40	2.00	1.80	1.90

Source: EIU (2011), author's calculation

economic growth and public policy, where market trust is hard to gain and easy to lose. Germany remains trusted despite relatively high deficits and debt levels; the recently adopted constitutional limit to public deficit spending might be one of the reasons. Trust is often related to the perceived ability of political institutions to make the necessary choices, not just, or even primarily, to the economic data per se. The Baltic countries have low debt, but were facing a market unwilling to lend when the collapse of growth wreaked havoc on public deficits. Still, even Latvia has this year regained investment grade for its public debt and was able to return to the private markets to finance some of its deficit. Denmark and Finland are in a complex situation, where fiscal tightening has to occur in the medium-term while higher deficits might be necessary to keep growth intact in the short-term. Russia has seen its fiscal policy position deteriorate, reflected in a rising oil price needed to achieve a balanced budget.

A third dimension of macroeconomic policy is the ability to avoid structural imbalances. At the moment, the economies in the Region appear balanced or on the path to getting there after the deep crisis. There are no dramatic signs of overheating, especially as the recent slow-down in global economic activity has removed exports as a strong growth driver. Some countries in the Region have also introduced measures to limit real estate price inflation by requiring higher minimum levels of capital for purchases.

Overall, the Baltic Sea Region has retained its strong overall position on macroeconomic competitiveness. On institutions, the strengths as well as the severe weaknesses in individual countries are structurally ingrained; no quick changes are to be expected. The EU context provides stability for its members, but does not ensure improvements of institutions beyond a formal minimum level. The relevant choices remain national, even when collaboration within the EU or the Baltic Sea Region can help. On macroeconomic policy, changes in performance can occur quickly, especially when institutional foundations are weak. This is the reason why many countries have chosen anchors for the monetary and – through national fiscal policy frameworks, EU commitments, or international debt agreements – increasingly their fiscal policy as well. The Region's strong current position is not unassailable and requires continuous attention.

Microeconomic competitiveness

The Baltic Sea Region benefits traditionally from its strong position on company sophistication and generally solid business environment, with particular strengths on demand conditions and a number of factor input conditions. The latest data confirms this view.

Physical infrastructure (Logistical, Energy, Communication)

Physical infrastructure, both for transport and communication, remains strong across the Baltic Sea Region. On logistical infrastructure there has been modest erosion over the medium term, particularly in terms of the perceived quality of the road infrastructure. Latvia, Poland, and Russia rank between 100 and 125 on this indicator; especially Latvia has registered a strong loss of position on this indicator. Poland and the Baltic countries all draw heavily on structural funds in their efforts to improve their transport infrastructure and accessibility. Over the 2007 – 2013 programming period, Lithuania has allocated EUR 1.6bn for this objective, followed by Latvia (EUR 1.2bn) and Estonia (EUR 682m). The total comparable budget for Poland is EUR 25bn, which based on the GDP share of the northern regions would imply around EUR 3.1bn for them. Norway has also lost significant position on the perceived quality of its road network, both in the short- and medium-term. Railroads are still perceived quite favorably. But there are discussions in a number of countries about the lack of sufficient reinvestments. In Sweden, the government has increased spending on railroads as public criticism mounted over delays last winter. The Region lacks an integrated high-speed train system, and the connectivity between the Baltics, Russia, Poland, and the rest of the Region remains relatively poor. Poland's infrastructure policy has been criticized for being too focused on the long-distance road network; the country is planning to launch a new integrated transport strategy. Denmark and Germany have approved plans for a tunnel-based connection across the Fehmarn Sound that will create a fixed connection between the Nordic countries and Western Europe. Russia's new "Strategy for Socio-Economic Development of the North-West Federal District" for the period up to 2020 includes plans for a wide range of infrastructure upgrading projects.

The communication infrastructure is well developed across the Region. This has become an area of intense competition between largely privately-owned companies. There is also a large degree of regional integration, with the leading Nordic operators active across most parts of the Region. Where challenges exist, they are related to regulation, pricing and market power, not so much lack of physical availability. Regulatory practices do differ across the markets in the Region, a fact sometimes lamented by operators active in different countries.

Physical infrastructure BSR

Indicator	Rank 2010	Chg vs 2009	Chg vs 2005
Logistical infrastructure	29	0	-4
Quality of roads	47	-3	-9
Quality of railroad infrastructure	27	-5	-8
Quality of port infrastructure	29	0	-5
Quality of air transport infrastructure	33	-2	-5
Quality of electricity supply	25	-2	1
Communications infrastructure	20	0	-1
Quality of telephone infrastructure	28	2	1
Internet access in schools	21	5	2
Mobile telephone subscribers per 100 population	26	-1	-2
Personal computers per 100 population	23	0	-3
Internet users per 100 population	17	0	0
Telephone lines per 100 population	27	-2	-7

Source: Unpublished data from the Global Competitiveness Report (2011), author's analysis.

Energy has been a topic of previous State of the Region Reports. As an aggregate, the Region has ample supply of energy sources. But these sources are unequally distributed across countries, and there are some emerging strains on electricity generation capacity in parts of the Region. Russia and Norway, to some degree also Denmark, have access to large reserves of oil and gas. (Poland's coal reserves are in the south of the country, away from the coast of the Baltic Sea.) A number of recent oil discoveries off the Norwegian coast, in the north as well as in the already well-developed west, have increased Norway's reserves significantly. Russia continues to struggle in mobilizing sufficient resources to tap into its existing reserves, especially in the Arctic. Norway and Sweden have large and well developed hydro-energy reserves. Sweden and Finland use a lot of biomass. Denmark and Northern Germany have created significant wind energy capacity; other parts of the Nordic region are following. The future of nuclear energy has been dealt a blow by the Fukushima disaster: Germany has announced a full shut-down of its nuclear plants. Sweden has opened the door for energy companies to invest in new nuclear capacity, but so far there is little tangible interest. Whether plans to invest in new plants in other parts of the Region, especially the Baltics and Kaliningrad, will proceed, remains to be seen. In the Baltics further transmission capacity to the Nordics has made a differences; the shut-down of the Lithuanian nuclear reactor remains to create high dependency on energy imports.

Innovation infrastructure

Innovation infrastructure is another key strength among the Baltic Sea Region's factor input conditions. There have been very few changes in the patterns of underlying fundamentals in this area.

In skills and education, a key concern remains quality. Most countries in the Region invest significant resources in the education system; enrollment rates are high. But the measures of educational attainment differ widely across the Region, with only a few countries, Finland foremost, registering outcomes significantly above the OECD average. There is no simple relationship between the resources invested and the outcomes attained. In some countries, like Germany, particular weaknesses in integrating a foreign-born student population effectively in the education system are an important reason for lower aggregate performance. In others, broader-based weaknesses in the educational system are candidates for explanation.

Individual countries in the Region have over the last few years implemented significant reforms in their educational systems. Sweden is a prime example, with a strong focus on teacher quality and other efforts. It is still too early to evaluate the impact of these efforts. In many others, progress has been much more limited. Denmark has made significant investments in its education system, based on the recommendations made by its Globalisation Council. Poland, too, has implemented significant reforms and has seen the educational attainment of students improve.

Innovation infrastructure BSR

Indicator	Rank 2010	Chg vs 2009	Chg vs 2005
Innovation infrastructure	20	-1	1
Quality of scientific research institutions	22	-3	-1
University-industry research collaboration	23	-1	-3
Quality of math and science education	34	-1	6
Quality of management schools	33	0	-1
Availability of scientists and engineers	24	1	2
Tertiary enrollment	17	0	-5
Utility patents per million population	22	0	-2

Source: Unpublished data from the Global Competitiveness Report (2011), author's analysis.

In innovative capacity, the Baltic Sea Region registers particularly strong performance. Quality of academic research is perceived as high, and linkages between the academic sector and companies are also seen as strong. This can seem surprising given the traditional view that the Region is not able to fully translate its academic capabilities into economic outcomes. Some of this mismatch might be related to Russia, the Baltic countries, and Poland, where existing research capacity might not find enough demand from a less sophisticated business sector. But the argument is also widely heard in the Nordics and Germany. Interestingly, the main weakness is in economic outcomes, not in the firm-level activities related to innovation. The translation issue, it seems, is not so much from academic excellence to firm behavior, but from innovative activity into domestic economic benefits.

The policy focus on innovation is intense in the Baltic Sea Region: A number of countries in the Region have over the last few years reorganized their innovation policy, or are in the process of doing so. Sweden is in the process of developing a new innovation policy. The last one from 2008 focused strongly on academia-business linkages and shifted the innovation funding system towards a more quality/performance-based structure. Finland went through a major review of its innovation policy only a few years ago. A key new objective has been the focus on internationalization of the Finnish innovation system, both globally and through intensified Baltic Sea Region collaboration. Norway has organized its efforts around a number of specific sectors. Denmark has created a multi-layered system of councils and programs designed to ensure a smooth transition from academic research to business application. Germany's "High Tech-Strategy" at the federal level has ensured that innovation policy remained the one policy area not affected by budget cuts during the crisis. The country's northern states are, however, underrepresented in many of these performance-based programs. Estonia is one of the first EU countries going through a new peer review process of its innovation efforts, currently based on "Knowledge-Driven Estonia,' the country's research, development, and innovation strategy for the 2007 – 2013 period. Lithuania has gone through a major review of its innovation system, modernizing the governance of universities, reorganizing public research institutions, and increasing the share of competitive funding for projects and institutions. Poland in October 2010

Innovation in the Baltic Sea Region

BSR Rank among European countries

Enablers		Firm Activities		Outputs	
Human resources		**Firm investments**		**Innovators**	
New doctorate graduates per 1000 population aged 25-34	7 (±0)	Business R&D expenditures (% of GDP)	6 (+1)	SMEs introducing product or process innovations (% of SMEs)	12 (-2)
Percentage population aged 30-34 having completed tertiary education	15 (±0)	Non-R&D innovation expenditures (% of turnover)	20 (-7)	SMEs introducing product or process innovations (% of SMEs)	13 (-6)
Percentage youth aged 20-24 having attained at least upper	21 (-1)				
Open, excellent and attractive research system		**Linkages & entrepreneurship**		**Economic effects**	
International scientific co-publications per million population	9 (±0)	SMEs innovating in-house (% of SMEs)	10 (-1)	Employment in knowledge - intensive activities (% of workforce)	17 (+1)
Scientific publications among top 10% most cited publications worldwide	15 (-1)	Innovative SMEs collaborating with others (% of SMEs)	9 (+1)		
Non-EU doctorate students as % of all doctorate students	10 (±0)	Public-private co-publications per million population	8 (±0)	Medium-tech and high-tech exports (% of total exports)	15 (+5)
Finance and support		**Intellectual assets**		Knowledge-intensive services exports (% of total service exports)	7 (+1)
Public R&D expenditures (% of GDP)	5 (+2)	PCT patents pplications per billion GDP	6 (±0)	New-to-market and new-to-firm sales (% of turnover)	20 (±0)
Venture capital (% of GDP)	7 (-1)	PCT patent applications in societal challenges per billion GDP	4 (+2)	Licence and patent revenues from abroad (% of GDP)	6 (+5)
		Community trademarks per billion GDP	15 (+2)		
		Community designs per billion GDP	10 (-2)		

Note: Coloring indicates relative strengths and weaknesses; numbers in brackets are changes relative to last available year
Source: Innovation Union Scoreboard (2011), author's analysis. State of the Region-Report 2011

launched its 'Building upon Knowledge' program, which includes a range of policy changes to reform the Academy of Science and create two new innovation funding bodies. The National Science Centre will be in charge of basic research, while the National Research and Development Centre will be dealing with applied research between research institutions and industry. Russia has announced major projects as part of its 'modernization strategy'.

The Nordic Innovation Centre, recently renamed as Nordic Innovation, is a platform for collaboration in innovation policy efforts across the Region. An important example was the Top Research Initiative (TFI) that pools resources from the Nordic countries to finance a region-wide competition for research initiatives. Another important collaboration effort (not directly related to Nordic Innovation) with regional implications is the European Spallation Source (ESS), a large-scale European research facility to be constructed in Lund with major support from Sweden and Denmark.

Financial Markets

The overall ranking on financial market infrastructure for the Baltic Sea Region identifies this as an area of slight disadvantage. This overall assessment obscures a number of different strengths and weaknesses as well as significant differences across countries within the Region.

Overall, banks in the Baltic Sea Region were less engaged in the US and global financial markets at the center of the crisis than many of their international peers. Still, financial markets across the Region were strongly affected, and governments took robust steps to ensure the solidity of banks' balance sheets. Banks from the Region performed well in the recent European 'stress'-tests, with the exception of HSH Nordbank in Northern Germany. While the emergency measures have in the meantime been removed, a number of countries have introduced new financial market regulations to deal with systemic risk-taking by the financial sector. Some regulators have introduced guidelines or rulings to limit real estate speculation. Others have focused on clarifying the reaction to bank insolvencies. In Denmark, these new regulations have already been tested in the bankruptcy of a regional bank. In Germany, the restructuring of the Landesbanken, including HSH Nordbank with a presence in Northern Germany and the Nordic countries, remains a key challenge. Both in Iceland and Latvia, government and foreign owners remain in charge of financial institutions that collapsed during the crisis. Latvia has after some delays published plans for the privatization of some of the banks it was forced to take over during the crisis. Foreign ownership of large parts of the banking sector has proven resilient through the crisis in the Baltic countries as well as in Poland. Overall, the banking sector in the Region looks stable compared to its peers. The perceived soundness of banks has recovered almost all of the losses incurred in 2009.

The coordination among regulators across the Region has also been enhanced. An important milestone was the "Cooperation agreement on cross-border financial stability, crisis management

Financial Markets Baltic Sea Region

Indicator	Rank 2010	Chg vs 2009	Chg vs 2005
Capital market infrastructure	33	3	-2
Regulation of securities exchanges	31	0	0
Financial market sophistication	31	-1	-2
Soundness of banks	57	12	-15
Ease of access to loans	39	3	-12
Venture capital availability	34	3	-8
Financing through local equity market	43	16	-6
Protection of minority shareholders' interests	33	-4	0
Doing Business , Getting Credit Legal rights index (WB)	48	-1	-4
Domestic credit to private sector	34	0	1

Source: Unpublished data from the Global Competitiveness Report (2011), author's analysis.

and resolution" between the Nordic and Baltic countries from August 2010.

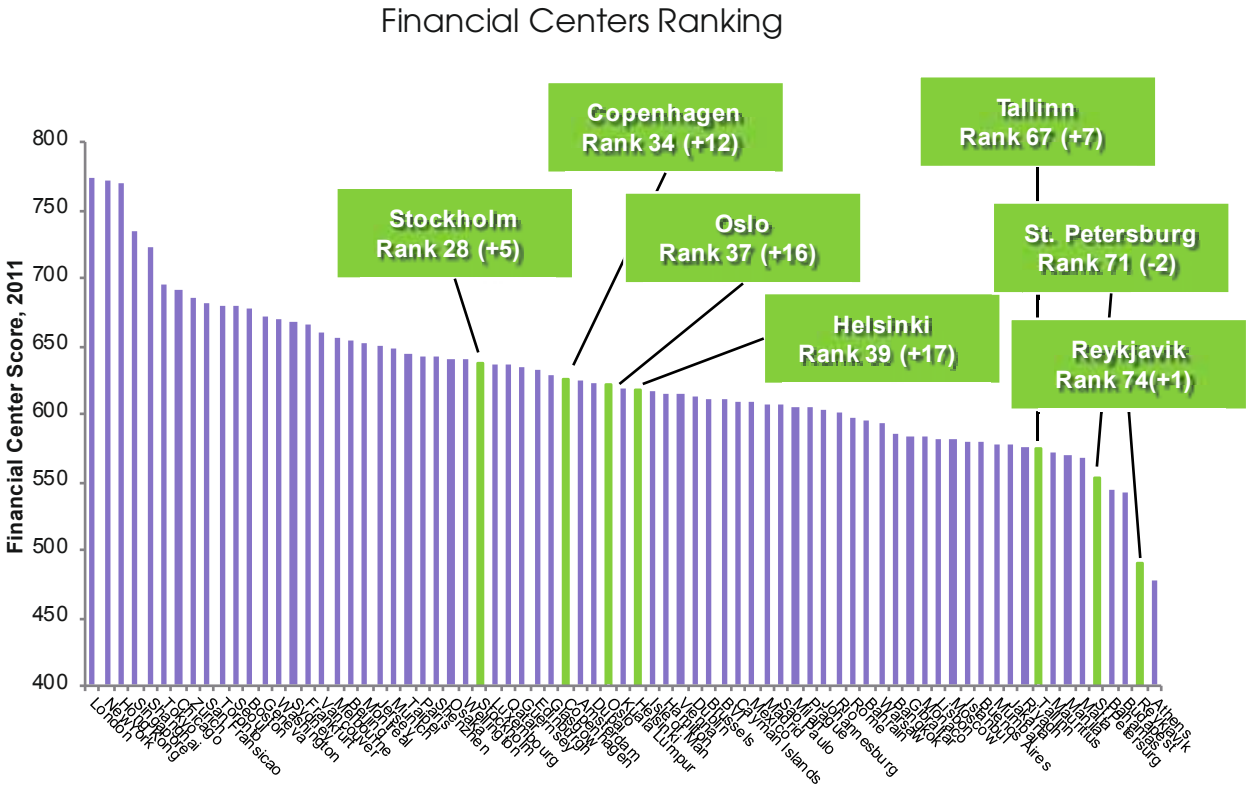
The financial sector's ability to provide access to capital for investment has come into renewed focus. The sentiment for equity finance had been improving, but is likely to again be severely reduced by the recent market disruptions. Across the Region there are debates as to whether companies are capital-constrained or just have pared down their investment plans. Changes in regulation were intended to increase banks' focus on risk. Whether current interest rate structures and the need to shore of capital ratios in the transition to new international banking regulations have decreased banks' willingness to lend unduly is hard to ultimately establish.

A number of countries across the Baltic Sea Region have created programs to enhance access to capital for small- and medium-sized companies, especially new entrants and high-growth firms. In Denmark, the Growth Fund (Vaekstfonden), created on the suggestion of the Globalisation Council, received additional capital in the recent Enterprise/ Business Package. Finland, Sweden, and Norway have government-linked venture capital programs, either through direct investments or con-financing of privately-run venture capital funds. More traditional financing through dedicated credit facilities or guarantee schemes are available across the Region, either through national programs or programs supported by the EIB.

In terms of the Baltic Sea Region as a financial center serving other economies, leading financial centers have benefited from the more solid environment in their domestic economies. Stockholm remains the Region's financial capital; Copenhagen and Helsinki, at a lower level also Tallinn, have seen significant gains relative to peers. Only St. Petersburg has lost the gains it had made in the previous years.

Administrative efficiency

Comparatively low levels of administrative efficiency are traditionally one of the key weaknesses among Baltic Sea Region factor input conditions. There have been no dramatic changes in how the Region's public administrations are perceived in this area, but the trend continues to be negative.



Source: Global Financial Center Ranking (2011), 10th edition, author's analysis.

There is no simple relation between size of the government and perceived administrative efficiency. The Nordic countries all rank in the global top 15 on perceived administrative efficiency, despite the high share of government in total GDP. Russia, Poland, and Lithuania rankworst, despite a smaller public sector. Germany's poor rank at 55th and Estonia's rank at 7th indicate that the legacy of a planned economy does not give a full explanation.

A number of countries in the Region, especially among the Nordics, have over the last few years launched efforts to reduce bureaucracy and simplify regulations. Often these efforts had a significant e-government component. There is, however, still no robust evidence to judge the impact of these efforts. One indicator is the World Bank's Doing Business report, which tracks regulatory rules and procedures in a number of key business activities. Except Poland and Russia, all Baltic Sea Region countries rank among the global top 25 on the aggregated measure for ease of doing business. Sweden, Latvia, Lithuania, and Poland improved a num-

Administrative infrastructure BSR

Indicator	Rank 2010	Chg vs 2009	Chg vs 2005
Administrative infrastructure	38	-2	-7
(Low) Burden of customs procedures	31	2	-3
(Low) Burden of government regulation	60	-6	-8
Ease of starting a new business	46	2	-4
(Low) Number of procedures required to start a business	34	-2	-7
(Low) Time required to start a business	51	-7	-10
Doing Business, Paying Taxes (Low) Payments number (WB)	23	3	-1

Source: Unpublished data from the Global Competitiveness Report (2011), author's analysis.

Doing Business in the Baltic Sea Region

	Overall	Enforcing Contracts	Registering Property	Trading Across Borders	Getting Credit	Closing a Business	Paying Taxes	Starting a Business	Protecting Investors	Dealing with Construction Permits
Denmark	6	30	30	5	15	5	13	27	28	10
Norway	8	4	8	9	46	4	18	33	20	65
Finland	13	11	26	6	32	6	65	32	59	55
Sweden	14	52	15	7	72	18	39	39	28	20
Iceland	15	3	11	79	32	17	35	29	74	31
Estonia	17	50	13	4	32	70	30	37	59	24
Germany	22	6	67	14	15	35	88	88	93	18
Lithuania	23	17	7	31	46	39	44	87	93	59
Latvia	24	14	57	16	6	80	59	53	59	79
Poland	70	77	86	49	15	81	121	113	44	164
Russia	123	18	51	162	89	103	105	108	93	182

Source: World Bank (2011)

ber of ranks since 2010, while Russia dropped further behind.

Competition

The actual degree of competition on domestic markets is a function of how open the market is to international competition and how intensely domestic companies compete.

Formal trade barriers in the Baltic Sea Region are low. The EU's internal market covers most of the Baltic Sea Region, including most of the trade with the EFTA members Iceland and Norway. The level of actual market integration, however, remains limited: On most markets, companies treat individual countries within the Region separately. The trend is towards more integration, but progress is slow. On these relatively small national markets, the level of competition often does not reach the level of larger markets like Germany, the UK, or the US.

Public policy has a significant impact on the degree of rivalry. Competition policy is, for the EU member countries, a responsibility of the EU Commission. For domestic and smaller size transactions, this responsibility has been delegated to national competition authorities. Anti-trust policy is perceived as highly effective in most of the Nordic countries and Germany, but relatively weak in the rest of the Region. Denmark and Sweden have recently introduced new measures to modernize the competition law. In Sweden, there are some initial indications that the measures to keep local and regional governments from competing unduly with privately-owned companies have had some effect.

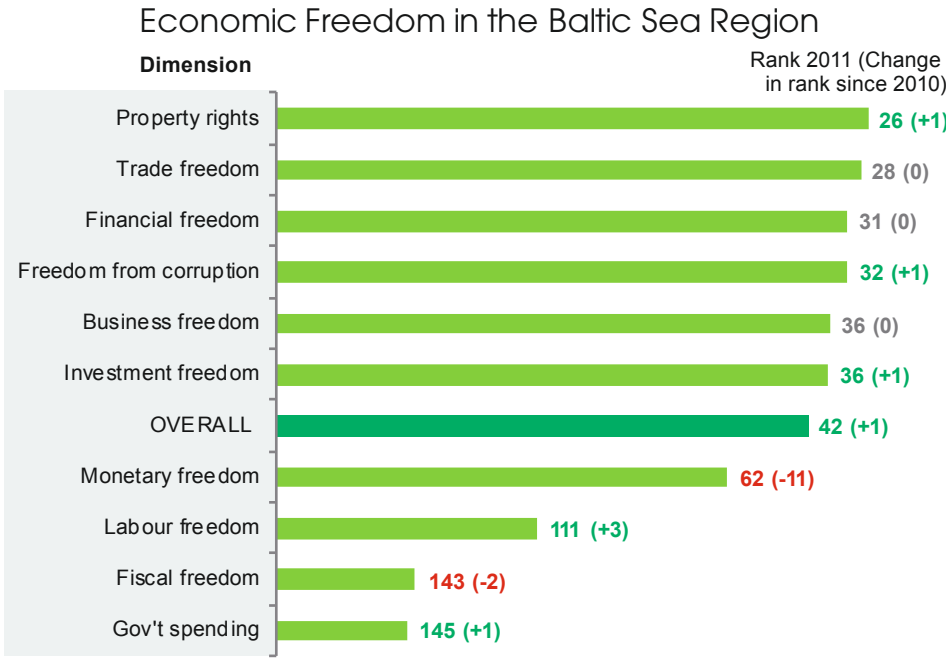
Government-owned companies are another channel through which the public sector has a significant impact on market rivalry. A number of countries across the Region have announced or have pondered plans to privatize some of their ownership stakes. The Swedish government has pushed through significant privatization over the last few years, including the privatization of the pharmacy-market. However, the minority government now lacks the parliamentary support for further privatizations. In Russia, the Ministry of Finance announced ambitious privatization plans as part of a fiscal consolidation drive. Whether these plans will be implemented remains to be seen. Conversely, Norway has recently announced a new ownership strategy that confirms its level of public ownership and the will to actively use its ownership role.

The Heritage Foundation's Economic Freedom index gives a broad, but also quite ideological perspective, on the ability of the private sector to

Context for strategy and rivalry BSR

Indicator	Rank 2010	Chg vs 2009	Chg vs 2005
Context for strategy and rivalry	32	0	0
Cooperation in labor-employer relations	32	-4	0
Pay and productivity	54	1	0
FDI and technology transfer	62	12	14
Quality of competition in the ISP sector	107	-83	-61
(Low) Impact of taxation on incentives to work and invest	91	1	3
(Low) Distortive effect of taxes and subsidies on competition	49	1	-9
Intellectual property protection	28	2	4
Restrictions on capital flows	32	9	4
Strength of auditing and reporting standards	30	-1	-1
Prevalence of trade barriers	48	2	-4
Prevalence of foreign ownership	47	-6	-8
Business impact of rules on FDI	59	14	-9
Intensity of local competition	39	-5	-4
Effectiveness of antitrust policy	27	2	1
(Low) Extent of market dominance (by business groups)	31	2	1
Efficacy of corporate boards	30	-1	-6
Low market disruption from state-owned enterprises	29	-2	2
Strength of investor protection	47	-3	0
(Low) Rigidity of employment	84	-1	-5
Regulatory quality	27	2	-3
(Low) Tariff rate	18	0	3

Source: Unpublished data from the Global Competitiveness Report (2011), author's analysis.



Source: Heritage Foundation (2011), author's analysis.

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compete freely on the markets of the Baltic Sea Region. The low overall level is largely a reflection of the large size of government in the Region, not of limitations to private enterprise.

Labor Markets

Labor markets in the Baltic Sea Region have highly heterogeneous structures. The Nordic countries – with the exception of Denmark – have often been singled out as inflexible in international assessments; see also the assessment by the Heritage Foundation above. But these views are under intense debate, not least because Nordic labor markets have tended to react much more flexibly to economic shocks than would be suggested by their perceived rigid regulatory structures. The World Bank has stopped using the indicator for labor market flexibility that it had provided in the past through its Doing Business report. The power of unions, the level of active labor market policies, and the level of protection given to those in regular employment versus those looking for a job differ widely across the Region. In the Nordics, unions continue to play a strong role. In Denmark, the flexicurity system makes it easy to terminate employment relations, while there are strong active labor market policies to support job search. In the other Nordic countries and Germany, barriers to firing are much higher. In the Baltic countries, labor market flexibility is high. The Russian labor market continues to combine high formal rigidity with high actual flexibility: wages tend to adjust strongly, allowing employment to remain high, and the degree of compliancy with the rules and regulations is low.

A general concern across the Region is an increasing mismatch between labor supply and labor demand, driven by growing skill requirements for new jobs that the currently unemployed are unable to match. While there is no clear evidence yet that this has resulted in a higher level of so-called "natural unemployment", there is case-based evidence of such a mismatch.

Over the last few years, a number of countries in the Baltic Sea Region have introduced reforms to improve labor supply. In Sweden, income tax rates have been reduced a number of times, employment agencies have been strengthened, and there have been specific new programs to integrate migrants more effectively into the labor market. A planned reduction in VAT for hotels and restaurants has been motivated with possible labor market effects. A number of countries have started to increase the pension age and to reduce options for early retirement; further changes are under discussion across the Region. Denmark, Finland, and Sweden have introduced a mix of measures to tackle youth unemployment and the high rates of

sick leave/disability. Denmark and Finland have increased the conditionality of unemployment benefits; Germany has introduced similar steps in recent years. In Germany, there is now an ongoing political debate about the use of minimum wages, which have already been instituted in a number of sectors. Poland's December 2010 Act on Employment Promotion is an example of efforts to improve matching on the labor markets.

Demand Sophistication

Demand conditions are driven by the needs of local customers. Government policy has a significant influence through its own behavior as a buyer and through the legal requirements it defines in support of consumer rights.

The Baltic Sea Region continues to rank high on buyer sophistication and the stringency of environmental and consumer regulation. The role of government as a sophisticated consumer of new products and services is, however, less strong. Especially in the Nordic countries, there has been a lot of rhetoric and programs directed towards user-driven innovation, including areas in which public sector buyers dominate the market. Progress has in most cases been relatively slow. Traditional purchasing practices focused on risk and cost minimization have worked against innovation. Other parts of the Region are further behind, with government procurement not yet a focus in competitiveness upgrading.

Cluster presence

The presence of clusters creates a context where existing business environment qualities can be brought to significantly better use. Local externalities multiply the benefits to individual companies and create a significantly higher level of dynamism, driving productivity, innovation, and entrepreneurship.

The Baltic Sea Region is home to roughly 50 strong regional clusters in the categories defined by the European Cluster Observatory. "Strong" is here defined by an employment level at least 50% higher than expected, given the overall size of the region (location quotient >1.5; NUTS 2 regions), and accounting for at least 1% of total employment in total European employment for this cluster category. These 50 clusters are less than 5% of all European regional clusters that match these conditions. In comparison, the Baltic Sea Region accounts for 7% of all cluster sector employment and 8.8% of all NUTS-2 regions.

St. Petersburg accounts for nine such clusters, Lithuania eight, Etelä-Suomi/Åland (Finland) and Latvia for four, Hamburg, Denmark, the Leningrad region, and Stockholm for three, Schleswig Holstein for two, and another eleven regions in Norway, Sweden, Finland, Russia, and Poland for one each. Fifteen regions in the Baltic Sea Region have no cluster that meets these criteria.

The Baltic Sea Region has a number of the ingredients for the evolution of dynamic clusters, but continues to rank relatively weak on the level

Demand conditions BSR

Indicator	Rank 2010	Chg vs 2009	Chg vs 2005
Demand conditions	22	2	4
Government procurement of advanced technology products	34	-1	6
Government success in ICT promotion	31	8	16
Laws relating to ICT	24	3	1
Buyer sophistication	26	0	3
Presence of demanding regulatory standards	21	0	3
Stringency of environmental regulations	22	0	-2

Source: Unpublished data from the Global Competitiveness Report (2011), author's analysis.

Supporting and related industries and clusters BSR

Indicator	Rank 2010	Chg vs 2009	Chg vs 2005
Supporting and related industries and clusters	27	0	-5
Availability of latest technologies	28	0	-3
Local supplier quantity	48	1	-19
Local supplier quality	28	-1	-4
Local availability of process machinery	26	-4	-6
Local availability of specialized research and training services	19	0	1
State of cluster development	34	1	-4
Extent of collaboration in clusters	32	2	-9

Source: Unpublished data from the Global Competitiveness Report (2011), author's analysis.

of actual cluster development and within-cluster collaboration. A significant number of cluster policy efforts have been launched across the Region over the last few years: Norway has the ARENA and the NCE (National Centres of Excellence)-programs. Sweden has Vinnväxt and a number of other programs at national and regional level. Denmark has a more network-oriented approach with Innovation Networks Denmark that still has many cluster features. Finland has just recently refocused its cluster efforts around the Strategic Centres for Science, Technology and Innovation (SHOK). Germany has a number of federal and state programs, including efforts in all of the states bordering the Baltic Sea. Poland has recently mapped its cluster efforts in established and in emerging clusters, identifying close to thirty such efforts in the regions on the Baltic coast. Lithuania is developing five 'valleys' to integrate science capabilities and companies in specific locations.

There is also a long tradition in cluster-related collaboration across the Baltic Sea Region. Building on the experience of the EU-funded BSR-INNO-Net project on clusters and innovation policy in the Baltic Sea Region, cluster efforts are now a central element of BSR Stars, one of the EU Baltic Sea Region flagship projects discussed later in this Report. Another example for joint action is the Nordic-German-Polish Cluster Excellence Benchmark Project that focuses on common tools and standards in cluster initiative evaluation.

Assessment

The competitiveness of the Baltic Sea Region remains high. Changes over the last two years have been modest, despite the huge fluctuations the economies of the Region were exposed to. Policy action is robust in many areas of competitiveness, with joint regional action playing a significant role in areas like innovation and infrastructure policy.

At the aggregate level, the relative position on individual dimensions of competitiveness is relatively balanced. Company sophistication, innovation infrastructure, and institutions stick out as advantages, while the degree of actual market rivalry, the level of administrative efficiency, and some other dimensions of factor input condition are relative disadvantages.

At the level of individual countries, the differences between strengths and weaknesses is significantly more pronounced and varied. For the Nordic countries, the challenge is predominantly related to their future position in the global economy as countries with small markets and – in absolute terms - small pools of innovation assets. For the Baltic countries, many dimensions of competitiveness need to be upgraded eventually; the key task is to identify a sequenced strategy for how to achieve this. Germany's northern regions lag – with the exception of the Hamburg metropolitan region - behind the more dynamic regions in the south and need to define a more effective catch-up strategy. Poland's Baltic regions, too, are generally behind the country's main economic centers. And for Russia's northwestern region, the challenge is largely the same as for the entire country: how to overcome the increasing dominance of an oil- and gas sector that continues to corrupt the institutional fabric of the economy.

3. Implications

The Baltic Sea Region has come through the crisis better than most of its peers. The collapse of world trade as well as the uncertainties on financial markets left their mark. But the economies proved to be flexible, and governments effective in implementing robust measures to support a relatively quick return to growth.

In the short- to medium-term, the main challenge is the renewed uncertainty about the global economic outlook. With less policy tools left in the arsenal to address the low level of demand in Europe and North America, it is likely that the most important trading partners of the Baltic Sea Region are facing an extended period of slow growth. There will be no external pull for the Region's economies. And while the domestic opportunities look somewhat better than elsewhere in Europe, they are unlikely to be sufficient for supporting high sustainable growth. Macroeconomic policy has been competent in the Region, but alone is not sufficient to overcome the limitations set by these external conditions.

In the medium- to long-term, the Baltic Sea Region is also facing structural shifts in the global economy. Internationalization is becoming more investment- and less trade-driven. This creates challenges for a traditionally export-oriented Region with highly international companies and a small home base. Strong input factors and competitive companies will remain an asset, but the Region needs to think about ways to translate these assets into economic benefits for its citizens. Already now the innovation data suggests an imbalance between what the Region offers and what it gets. Many policy efforts, especially new innovation policy strategies in countries like Estonia, Finland or Sweden, have been launched or are under discussion to deal with this challenge. Others, like the fragmentation into small markets, are important as well, but are more complex to address. There are policy initiatives under way, but it is hard to see them as sufficiently ambitious to have the needed impact.

What does this imply for collaboration across the Baltic Sea Region? First, there are a number of competitiveness issues where regional collaboration is essential for making meaningful progress. Without it, even the best national policies are unlikely to deliver full results. The prime example is further market integration to overcome the relatively low level of domestic market rivalry. Market integration is no longer a matter of dismantling tariff and traditional non-tariff barriers, at least not among the EU members in the Region. It is a question of fully integrating market structures such that companies can operate across national boundaries without loss of efficiency.

Another area is cluster development. If the nation is seen as the relevant economic arena, cluster development already starts at a suboptimal level. Allowing and encouraging cluster specialization to occur across the Region would enhance the opportunities for more clusters to emerge that can compete at the European and global scale.

Other areas are physical infrastructure integration, including on energy generation and

transmission, collaboration in macroeconomic policy and financial market regulation to avoid contagion problems of national imbalances, and the internationalization of the innovation system. Cross-border collaboration within the Baltic Sea Region is not an alternative to global outreach. But – and Finland is a good example – collaboration within the Region can be a stepping stone to create the critical mass that makes internationalization at the global scale successful.

The second area includes activities where policy action needs to be taken at the national level, but where challenges across the Region are similar. Joint learning and experimentation can lead to the design of better policies than any national process could deliver. There is a wide range of policy areas in which such benefits exist:

- In cluster policy, there is a common interest in developing more effective approaches for cluster management as well as devising robust impact assessment tools.
- In innovation policy, the need to find better ways to mobilize the power of governments as buyers of new products and services remains largely unexploited.
- In education policy, the need to better serve the needs of immigrants and other minority populations, as well as a general focus on quality are shared by many countries.
- On macroeconomic management and financial regulation, complex issues have to be managed everywhere and often stretch the capabilities of especially smaller countries in the Region.

Finally, there is a third group of issues where individual countries in the Region can benefit just from drawing on the experience of more advanced partners in the Region. This has happened in a lot of cases over the last two decades, especially between the Nordic and the Baltic countries. There remains potential in this type of collaboration. It remains the case that stronger institutions and more efficient public administrations in the Baltic countries help the entire Region, not least the Nordics.

Poland: Economic performance and policy

By Ryszard Petru and Ignacy Święcicki, DemosEUROPA

Polish economic performance

Poland was the only country in Europe to avoid recession during the recent global crisis, but growth did slow down from 6,8 percent in 2007 and 5,0 percent in 2008 respectively, to 1,7 percent in 2009. Main factors for the more robust performance of the Polish economy were its lower dependence on exports, its flexible exchange rate, and its less developed financial sector. Both the lower export exposure (exports are about 40 percent of GDP vs 80 percent in Hungary, the Czech Republic or Slovakia) driven by a larger and less open domestic economy and the fact that credit is still much smaller relative to GDP than in advanced economies are longer-term challenges for Poland, despite their short-term benefits during the crisis..

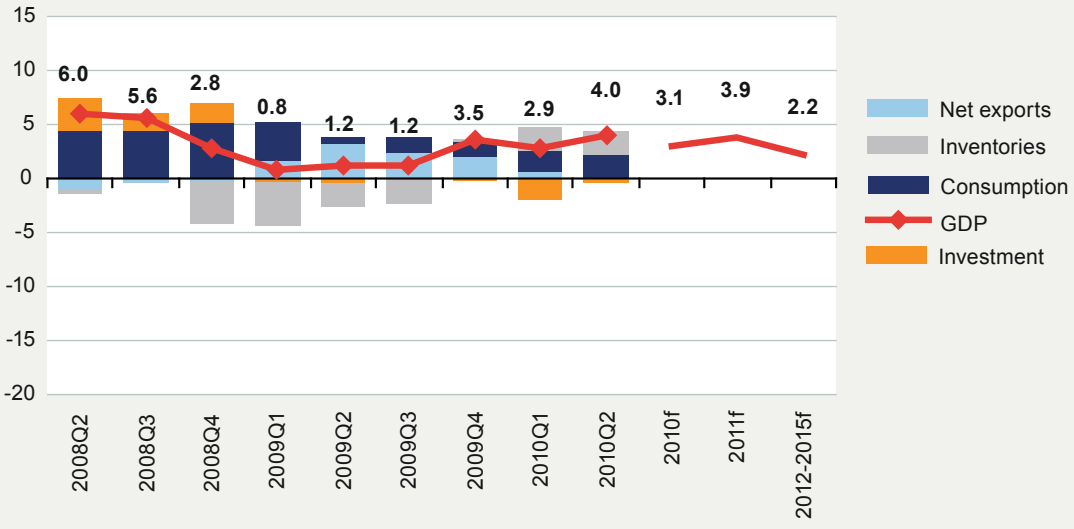
GDP growth in 2009 was mainly fuelled by growth in net exports (see chart 1). Domestic consumption decreased, as households increased their saving in the face of deteriorating conditions on the labor market and pessimism about the future. Private investments and inventories fell, too, but higher public investment made up for some of the reduction.

The growth of net exports in 2009 – the Polish trade balance changed from 3,9 percent deficit in 2008 to 0,1 percent surplus in 2009 - was mainly achieved through a strong decline of imports. Polish import prices increased more than elsewhere as the zloty depreciated more than other central European currencies (see chart 2). At the same time, exports did perform slightly better than in neighboring economies (see chart 3), as Polish exports are more dominated by foreign-owned companies less reactive to exchange rate fluctuations.

The resurgence of growth to 3.8 percent in 2010 was driven by higher domestic consumption and inventory rebuilding. The increase in domestic consumption was second only to Sweden in the EU. Polish exports growth weakened in the second half of the year, as Western European demand decreased as a result of fiscal tightening. With domestic consumption solid, the Polish trade deficit soared.

The fall of external demand recorded since 2009 translated into lower production and weaker labor demand. Many enterprises undertook labor hoarding strategy. The necessary adjustment came instead largely through wage policy made easier by the government's decision to reduce labor

Chart 1: GDP composition in Poland

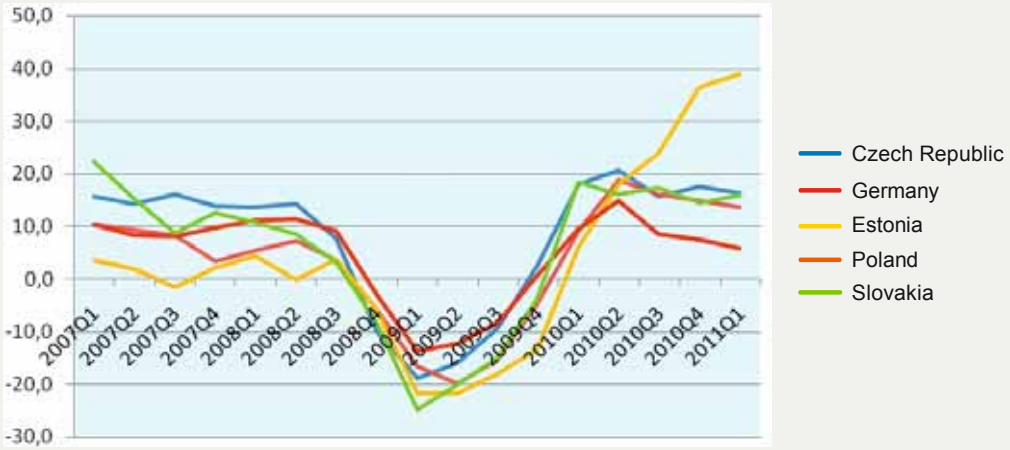


Source: Bre Bank

Chart 2: Exchange rates PLN/CHF and PLN/EUR during the crisis

Source: Money.pl

Chart 3: Exports of goods and services (percent change, YoY)



Source: Eurostat

market regulation. Domestic consumption was supported by pre-crisis tax cuts. Personal income tax rates as well as the tax wedge (the difference between net salary and the employer's wage cost) have been reduced. These measures, introduced by the previous government back in 2007, had their full impact in 2008-2009 and have helped to ease the crisis in Poland. The solid growth in public investment was fuelled by EU transfers: Poland is the largest recipient of EU structural funds and has proved efficient in their spending. From the total allocation of EUR 67 billion for 2007-2013, Poland has already allocated more than EUR 40 billion. According to estimates by the Ministry of Regional Development, GDP growth in 2010 has been 0.6-0.7 percentage points (p.p.) higher due to the use of EU funds, and their impact will peak in 2013 with 0.8-1.2 p.p. contribution to GDP growth.

In the financial sector, strong pre-crisis macro-prudential policy and swift monetary policy reaction in the early stages of the crisis were instrumental in containing the risks. The volume of foreign currency loans was limited before the crisis and the situation was closely monitored by Polish Financial Supervision Authority. Polish banks were largely involved in classical deposit-credit operations, which helped them to avoid toxic assets issues. The Polish Central Bank introduced liquidity and credit easing measures in October 2008. The Polish Monetary Policy Council, in line with other central banks, responded to the crisis by cutting interest rates from 6 percent in mid-2008 down to 3.5 percent in mid-2009. Since the beginning of 2011, rates have been increased four times in response to rising inflationary pressures. The Polish government increased deposit guarantees to support

confidence in the banking sector. The so-called "Vienna initiative" – a collective agreement by banks from Western Europe with subsidiaries in Central and Eastern European countries – contained the risk of excessive capital outflow. A series of meetings organized by the EBRD with the participation of IMF, European Commission, national banking authorities, and representatives of major banks resulted in commitments to retain funds with subsidiaries instead of strengthening mother banks in Western Europe. The Polish Financial Supervision Authority (FSA) also was able to convince foreign bank owners to retain profits and strengthen the capital base of their Polish subsidiaries. This was followed by specific regulations (especially so-called Regulation T on consumer credit), which reduced the risks in the Polish banking sector. During the last two years, risk perception of the financial markets in the region was redefined. After the strong outflow of capital in February 2009, investors returned to Poland. The Polish risk outlook remained stable (constant PL-German T-bonds yield spread). Building on these positive developments, Polish Ministry of Finance increased the bonds auctions in the first half of 2011 and secured around 90 percent of its yearly borrowing needs by August. In May 2009, Poland has been granted a Flexible Credit Line (FCL) from the IMF – an instrument that has helped to restore confidence to foreign investors in the Polish economy. The arrangement was extended for another year in July 2010 and for two years in January 2011 (with an increased lending amount).

For 2011 GDP growth is forecasted to reach 4 percent, with a small slowdown in 2012 and 2013 – to 3.2 percent and 2.9 percent respectively (National Bank of Poland estimates). Such a slowdown would be due to fiscal austerity, smaller absorption of EU funds, and the end for inventory rebuilding. The biggest uncertainty for the Polish economy comes from the fragile recovery of its trading partners, spillovers from the fiscal crisis in EU periphery, and insufficient reforms of domestic public finance.

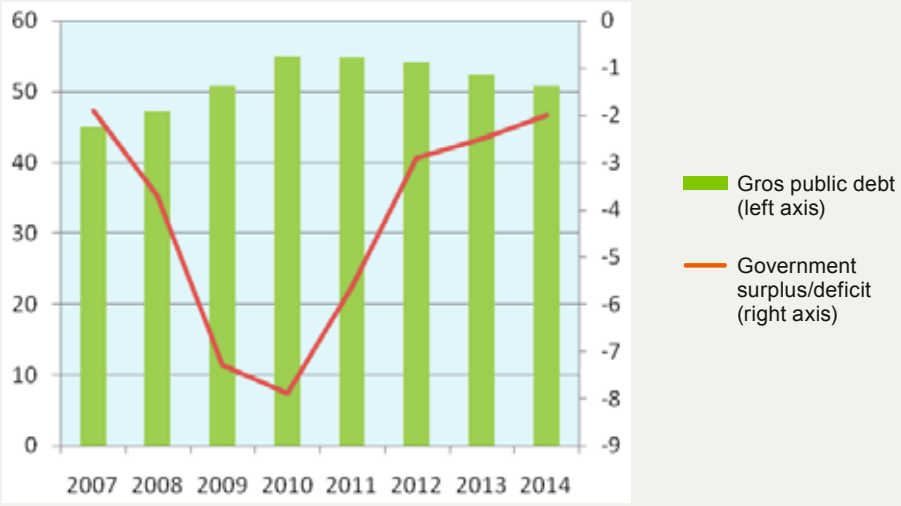
Polish economic policy

The economic slowdown has left Poland with one of the highest budget deficits in the EU. It has peaked at 7.9 percent of GDP in 2010, which was the result of lower income and some small fiscal stimulus measures. Polish public debt is lower than the 60 percent Maastricht limit and, using Polish accounting standards, slightly below the 55 percent threshold imposed under the Polish Public Finance Act. If this threshold is breached, the debt to GDP ratio needs to be reduced within two years. At the European level, Poland is still under Excessive Deficit Procedure. In the plans presented to the Commission (e.g. Convergence Report 2011), it is forecasted that the deficit would come down to 2.9 percent of GDP in 2012. The required 5 p.p consolidation within two years seems highly ambitious.

A range of fiscal measures were introduced to reduce the deficit: VAT rates were raised by one percentage point; personal income tax brackets were frozen; the transfers of pension contributions to private pension funds was suspended; a new spending rule was introduced in the framework for fiscal policy; and some of the early retirement provisions were reformed.

Changes in the pension system have been intensely discussed among economists and policy-makers. The employee's pension contribution has been equally divided between the public and private insurers. This was supposed to facilitate the transition from pay-as-you-go and defined-benefit system (before 1999, fully state-owned) to individual pension accounts and defined-contribution system. The changes introduced by the government in 2011 substantially reduced the amount transferred to the private pension funds. It is forecasted to reduce the budget deficit by 0.7 percent GDP in 2011 and 1.2 percent GDP in 2012 – including the reduced costs of debt servicing. Among less controversial changes, the biggest impact should be achieved by the VAT tax increase (by 1 p.p.), reforming some of early pension provisions and introducing a temporary spending rule for the general budget. The measures are overall foreseen to reduce the government deficit by 4.62 percent GDP over 2011 and 2012. As the EU

Chart 4: Gross public debt and Government deficit as percent of GDP



Source: Ministry of Finance

and IMF point out in their reports, achieving the budgetary goal in 2012 would require additional measures such as reducing employment in public administration or further reform of disability pension system.

Poland's current pace of economic growth – around 4 percent per annum - is not enough to close the gap with Western Europe and remains much below Poland's potential. There is a need for deeper reform of public finance, for improving the legal framework for business, and for addressing infrastructure needs in areas such as transport, energy systems,, and broadband.

Polish public finances had the best long-term outlook in Europe when taking into consideration the ageing of the society. However, recent reform of the pension system increased long-term burden on public finances. In order to effectively reduce borrowing needs, a number of reforms are needed: the effective retirement age has to be increased and statutory retirement age equalized between men and women; early pension provisions have to be reduced further; and a permanent spending rule should be introduced.

Poland still has a very low share of economically active people in the working age. These numbers are especially worrying among the young workers, women, and older (55-65) workers. Mobilizing them could provide a significant boost for the Polish economy, but requires further liberalization of the labor market, including measures for women who want to combine work with raising children. There is also an urgent need to reform the special social insurance system for farmers. They are exempted from the general tax system, and the expenditures on their pensions and disability payments are largely covered by the general budget. Such a system reduces the pressure for workers to move out of the agricultural sector into more productive jobs. Currently, around 12.8 percent of the workforce is employed in agriculture, but they produce only 3 percent of GDP.

Apart from consolidation of public finance, the main challenge for Poland on the path to permanent acceleration of growth and well-being is the infrastructure, be it transport, energy, but also a whole set of systemic features are necessary for the creation of a modern, innovative economy. A comprehensive national strategy "Poland 2030: Third wave of modernity" should be based on three pillars: innovation, diffusion, and effectiveness. It should be designed to create new competitive advantages based on digitalization and creation of "digital impact" in the economy. It would bring well-being to currently poor areas by appropriate diffusion policies. And it would be strengthened by effective government and high social capital.

Poland and Baltic Sea Region Integration

The EU Baltic Sea Region strategy has been devised under the assumptions of no new institutions and no new funding. It has also been introduced in the midst of 2007-2013 financial perspective, which made allocating financial sources for its purposes even more difficult. In the short and medium run, the gains from Poland in taking part in the strategy process are mostly of a "soft" nature, for example, in reputational gains in areas such as environmental protection. Concrete gains in terms of competitiveness may come, but require more time and more political weight attached to the integration within the Baltic Sea Region.

In order to foster cooperation with more developed partners in the region, Poland has to first prove its engagement and overcome the image of a main polluter of the Baltic Sea. Poland should actively engage in policies and actions in this field. A good opportunity would be to use its role as a coordinator of one of the flagship projects in this area. In terms of competitiveness, Poland is interested in technological cooperation with other countries in the Region. This can include the creation of clusters, common business parks, or cooperation between scientists and university units. This can and should be strengthened by presenting the country's strengths in human capital, for example, in its outstanding maritime universities.

Other more basic aspects should not be neglected. The Baltic Sea Region suffers from many obstacles to the free movement of goods and services. Poland is leading one of the projects on the barriers to smooth functioning of the internal market in the Baltic Sea Region (see the coverage in this Report). Removing such barriers as well as improving the infrastructure in the Region (transport networks, energy connections) could bring important benefits for Poland. This, however, requires more financial resources as well as political determination. Poland has to strengthen its domestic administration and add more resources to dealing with the Baltic Sea Region strategy. Sweden, for example, has earmarked financial resources in the general budget to spend on the projects conducted within the strategy. Poland could do the same, or engage more in creating an implementation facility administered by the European Investment Bank to finance projects in the Region.

The EU Strategy for the Baltic Sea Region can enhance Polish *soft power* through constructive engagement. Poland's engagement in Baltic Sea Region integration can create much broader economic benefits in the long run. But Poland has to put more effort, financing, and administrative resources into regional collaborations to achieve these goals.

This section of the State of the Region Report describes the patterns of regional collaboration across the Baltic Sea Region. Following the tradition of past Reports, it profiles the activities and current plans of key regional organizations and networks. It then describes the activities of international financial institutions in the Region. Finally, it provides examples from some of the projects under way as part of the EU Baltic Sea Region strategy and discusses the progress the strategy process has made since its launch two years ago.

Section B: Collaboration in the Baltic Sea Region

As competitiveness, collaboration is an important policy concept in Europe. But again there are marked differences between how this concept is perceived and used in the Baltic Sea Region versus the rest of Europe. Some of these differences might be the mere reflection of the different policy areas that are in focus. Others might also be related to underlying conceptual differences in how collaboration and the future path of integration are seen.

For the Baltic Sea Region, collaboration is about joint activities to upgrade competitiveness in areas where common action can add clear value. This is the case in areas where countries can learn from the experience of neighbors tackling similar problems, where policy actions or investments have strong cross-border effects, or where the national borders are not aligned with the boundaries of integrated markets.

For the European Union, the focus of collaboration has been much more about aligning rules and regulations through shifting the power of policy areas from a national to a EU level, and about trading-off the promise of support against the commitment to relinquish control over policies that have traditionally been under full national sovereignty.

The EU's approach to collaboration is much more ambitious than that of the Baltic Sea Region and has the potential to enable necessary reforms in countries where national politics alone have proven unable to do so. But it is also politically much more complex; relying on the support of national electorates for individual measures they would not accept on a stand-alone basis, but can agree to when packaged with other measures they favor. It requires powerful institutional structures that make sure that such package deals do not unravel. Collaboration in the Baltic Sea Region occurs in a much more flexible environment of common platforms, networks, and a combination of trust and operating practices that have developed over time. Joint action only occurs among partners that all see benefits in participating, without the need for legal commitments to support 'package deals'.

This part of the 2011 Report gives an update on the state of collaboration on competitiveness upgrading across the Baltic Sea Region. The first section provides an overview of activities that have been pursued by regional organizations over the last 12 months. The second section includes contributions from the EIB, the EIF, and the NIB as well as a profile of EBRD lending in their activities in the Region. The third section then discusses in more detail the progress on implementing the EU Baltic Sea Region strategy, focusing specifically on three key projects undertaken within the context of the overall strategy.

1. Regional networks and initiatives

This section provides an overview on the activities that have been pursued by key regional organizations over the last 12 months through individual and collaborative initiatives. It is based on material provided by the organizations. The overview starts with CBSS, NCM, BSSSC, and UBC, four government organizations covering all or large parts of the Region. BaltMet, EuRegion Baltic, Scanbalt, BCCA, and BDF are the next group, including project-based networks of regional and local governments as well as private and public-private structures. The BSR Programme and Sida's Baltic Sea Unit provide financing for cross-regional efforts, one supported by the EU, the other by Sweden. The Baltic Institute and the Pan-European are examples of research institutions with a strong focus on the Baltic Sea Region and involvement in cross-regional projects.

The Council of the Baltic Sea States (CBSS; www.cbss.org) was created in 1992. 2012 marks the 20th Anniversary of the Council. Germany, one of the driving forces behind the Council's creation, holds the presidency for 2011-2012.

CBSS provides an intergovernmental platform for regional cooperation between the eleven countries of the Baltic Sea Region as well as the European Commission. It works through network and project based activities to benefit the Region. Environment and sustainability, economic development, energy, education and culture, and civil security and the human dimension are the five priority areas for the organization.

Building on the recent reform of the CBSS, the Germany Presidency is devoting special attention to "coherence", i.e. the improvement of cooperation between the various actors in Baltic Sea Cooperation, and the gradually emerging "division of labor" between them. One of the major developments with significant impact on the structure and operations of the CBSS, is the EU Strategy for the Baltic Sea Region. The CBSS, its various expert groups, and network bodies, are increasingly utilized as facilitators of cooperation among EU and non-EU Member States for some of the strategy's actions - notably in the fields of sustainable development, economic development, and civil security. The CBSS will, for example, work closely with the Danish Defence Command as Coordinator of Priority Area 14 of the EU Baltic Sea Region strategy with particular responsibility for the communication strategy in that area. Additionally, the Northern Dimension Partnership in Public Health and Social Well-Being (NDPHS), hosted at the CBSS Secretariat is Priority Area Coordinator for Health under priority area 12 of the EU Baltic Sea Region strategy.

Another main focus is the interplay between the four regional councils of the north (Arctic Council, Barents Euro-Arctic Council, Nordic Council of Ministers, and the CBSS). Most recently the CBSS Secretariat hosted a joint meeting

of Regional Councils, including participation of the Mediterranean Union Secretariat. The context for this work is provided by the EU Strategy for the Baltic Sea Region and the Northern Dimension Policy Framework. The regional cooperation components of the Strategy for Socio-Economic Development of the North-West Federal District of the Russian Federation will possibly also play a role in the future.

The Expert Group on Maritime Policy (established in 2009) has continued to develop and has held several key events, including a two day Maritime Cluster Workshop in Klaipeda, which will have a follow up in October 2011 in Germany. The group has held a session at the Maritime Stakeholder Day in 2010 and arranged a workshop, bringing together experts from the shipping industry, business leaders, policy makers, and government officials in the field of Liquefied Natural Gas to assess the economics, feasibility, and ways forward to further promote LNG as a maritime fuel for shipping.

The Baltic Sea Labour Network Project, EU Baltic Sea Region strategy Flagship project in Priority 8.7 (BSLN), where the CBSS participates in the steering committee, contributes to the promotion of a pan-Baltic labor network. It aims to enhance awareness of the importance of labor market issues, and to aid the development of the trans-national dimension in labor market policies with joint innovative strategies, concepts and actions that address mobility and demographic changes.

The CBSS Expert Group on Sustainable Development – Baltic 21 has 8 funded Lighthouse *Projects* of which 5 are EU Baltic Sea Region strategy Flagship projects. A number of them will conclude in 2011:

- *Agora 2.0* uses heritage tourism based on principles of sustainability to strengthen the Region's identity (www.agora2-toruism.net)
- *BaltAdap* develops a Baltic Sea Region-wide climate change adaptation strategy (www.baltadapt.eu)
- *Baltic Marine Litter* (MARLIN) contributes to the reduction of marine litter on the shores of the Central Baltic area.
- *EcoRegion* develops the world's first Eco-Region plan for the Baltic Sea Region (www.baltic-ecoregion.eu).
- *EcoVillages* aims at helping our society to get closer to nature again and to develop new ways of living together on land in a genuinely more sustainable way (http://gen-europe.org/activities/projects/ecovillages/index.htm)
- *New Bridges* improves the management of quality of life through urban-rural planning (www.urban-rural.net).
- *SPIN* identifies and tests incentives for SMEs to develop and apply eco-innovations (www.spin-project.eu)

The Baltic Sea Region Energy Cooperation network (BASREC) is the primary actor for CBSS dealing with energy issues. BASREC has several energy projects on topics such as wind power, energy efficiency in public infrastructure, and CO2 transportation and storage. The Bioenergy promotion project, based upon the cooperation between Baltic 21 and BASREC, aims to develop an integrated Baltic Sea Region approach to the sustainable use of bio-energy. It assesses existing

policies for sustainable supply and use of biomass produced for heating and cooling, electricity generation, and as a transport fuel. The project, identified as a Flagship project in the EU Baltic Sea Region strategy, will come to a close in late 2011 (http://www.bioenergypromotion.net). The EuroFaculty Project in Pskov continues to update the curricula in Business Management, and will introduce a Masters level program in the recently approved second phase of the project. The cultural cooperation network ARS BALTICA will celebrate its 20 year anniversary and organize the cultural launch of the German Presidency of the CBSS.

The CBSS will conduct a feasibility study on a Baltic Sea Coastguard Network with Finland as the lead partner. The Secretariat will have a role in the coordination of work to reinforce maritime accident response capacity for protection from major emergencies, including winter storms and floods. The long standing CBSS Expert Group on Nuclear and Radiation Safety (EGNRS) has just released a report on environmental radiation monitoring programs.

The CBSS Task Force against Trafficking in Human Beings (TF-THB) has developed projects with the United Nations Office on Drugs and Crime (UNODC) in Vienna and the International Organization for Migration (IOM). The TF-THB is likely to have a role in a project on preventative measures against human trafficking and on providing support and protection for victims and groups at risk within the context of priority area 15 of the EU Baltic Sea Region strategy. The Expert Group on Cooperation for Children at Risk is following up on two research projects involving universities, both inside and outside of the Region, largely funded by the European Commission. CBSS continues to work closely with regional networks like the Prosecutors General network and the Group on Tax cooperation.

The **Nordic Council of Ministers** (NCM; www.norden.org) is the platform for inter-governmental cooperation between the Nordic countries. NCM has a broad range of activities within 11 different Ministerial Councils. Traditionally, the areas of Education & Research, Culture, and Innovation cover over half of the total budget of over 900 million Danish kronor (approx. 120 million Euros). Over the last few years, collaboration on competitiveness issues, in particular research and innovation, has become an ever more prominent part of the agenda.

A high priority for the NCM is the Nordic cooperation effort to better meet the challenges and opportunities of globalization. Since globalization was identified as a new priority by the Prime Ministers in 2007, 22 different initiatives have been launched. Some of the initiatives have been finalized, while new or strengthened initiatives were launched in October 2009. In 2011 the budget for the globalization effort was increased to 72 million Danish kronor (close to EUR 10m). The new initiatives started or reinforced in 2009 include:

- Strengthening the "Development and profiling of the Nordic Region as a centre for creative industries".
- Stimulating major Nordic co-operation efforts in the health and welfare fields.
- Further developing the Nordic Research and Innovation Area (NORIA) through cutting-edge science projects.
- Further developing the Nordic Region as the "Green Valley of Europe".
- Analyzing the preconditions for an innovation program to support the development and demonstration of energy-efficient and CO2-neutral construction, and energy-plus buildings in the Nordic Region.

The third Nordic Globalization Forum took place on 20 May 2010 in Snekkersten, Denmark, based on "the Nordic way out of the economic crisis with the help of green growth". The Nordic Prime ministers launched a Nordic task force for green growth to recommend concrete Nordic initiatives. These recommendations will be discussed further by the Prime Ministers at the next Nordic Globalization Forum in October 2011 in Copenhagen.

While the NCM focuses on collaboration among the Nordic countries, it works very actively with its neighbors in the Baltic Sea Region. The areas of priority in the cooperation with Esto-

nia, Latvia, and Lithuania, and with Northwest Russia, are education, research, innovation, environment, climate, and energy issues. NCM is strongly committed to the Northern Dimension and contributes actively to the implementation of the Action Plan for the EU Baltic Sea Strategy. Both policies are integrated parts and priorities of the policy of NCM for the cooperation with its' neighbors in the Baltic Sea regions and are seen as important frameworks for making the North of Europe 'the Top of Europe'. In addition, the NCM's cooperation with Poland and Germany is being developed.

The NCM has taken the lead in several Flagship projects of the EU Baltic Sea Region strategy and is keeping the strategy high on the political agenda. NCM organized a conference on "Green growth in the Baltic Sea Region" in May 2011 together with the European Commission and BDF. The flagship projects led by NCM are focused on cooperation in the areas of forestry, plant genetic resources, and veterinary contingency planning. A feasibility study on infrastructure for the fifth freedom has been carried out and a flagship project in this field is now being considered. In other areas of the Action Plan, NCM is discussing with relevant partners the development of additional flagship projects and how the NCM's regional network and experiences could be utilized, for instance on the internal market and removal of border barriers. In addition, NCM plays an active role in involving Russian partners in the projects, for instance in a project on cross-border marine pollution response cooperation.

VASAB (www.vasab.org) is a platform for collaboration among ministries across the Baltic Sea Region involved in spatial planning and development. Norway has chaired VASAB since July 2010.

On 17 November 2010 the Committee of Senior Officials of the Council of the Baltic Sea States (CBSS) "accepted placing VASAB under the CBSS umbrella". This decision concluded a process of re-defining the cooperation framework between the CBSS and VASAB, initiated by the CBSS Elsinore Declaration of 4 June 2009 and supported by the VASAB Vilnius Declaration of 16 October 2009. These decisions identify VASAB as a network closely connected to the CBSS. In order to achieve more synergies between the two organizations, VASAB regularly exchanges information with the CBSS. For example, a CBSS representative is invited to participate in all CSPD/BSR meetings. VASAB remains independent in terms of the budgeting, reporting, and having a secretariat.

The *Long-Term Perspective for the Territorial Development of the Baltic Sea Region (LTP)* was adopted at the 7th Conference of Ministers Responsible for Spatial Planning and Development in 2009. The VASAB Action Plan implementing this policy is organized around three strategic directions:

- Promoting urban networking and urban-rural cooperation
- Improving internal and external accessibility
- Enhancing maritime spatial planning and management

VASAB will continue the promotion of best practices in land-based spatial planning and sustainable development, and will establish a monitoring mechanism for the territorial development of the Region. The VASAB annual conference in 2011 was devoted to the meaning of the territorial cohesion for the Baltic Sea Region.

The joint HELCOM-VASAB Maritime Spatial Planning Working Group has developed joint HELCOM-VASAB Baltic Sea Broad-Scale Maritime Spatial Planning Principles that have been adopted both by HELCOM and VASAB. In 2011 the working group is testing the application of these principles in the Bothnian Sea in the context of the PLAN BOTHNIA project.

The **Baltic Sea States Sub regional Co-operation** (BSSSC) is a political network for regional authorities in the Baltic Sea Region. The BSSSC co-operates closely with other Baltic Sea and European organizations in order to promote the interests of sub-national regions around the Baltic Sea towards national authorities, EU institutions, and others. The BSSSC acts as an umbrella

organization and as a forum for concrete cooperation projects. The BSSSC operates through its board members and ad-hoc working groups. Key areas of collaboration are maritime policy, climate change and sustainable development, public health, transport and infrastructure, youth policy, science and education.

BSSSC has been an active player in the development of the EU Baltic Sea Region strategy. The official consultation process was launched by the European Commission at the BSSSC Annual Conference in Kaunas in September 2008, where the first of four roundtables focused on transport and accessibility was held. The first Annual Forum of the EU Baltic Sea Region strategy was organized back-to-back with the BSSSC's Annual Conference in Tallinn in October 2010. The BSSSC and its members are involved in the implementation of the strategy through taking on the responsibility for flagship projects, giving support to numerous projects, and participating as a key stakeholder.

The BSSSC Working Group on Maritime Policy developed a five-point action plan, Clean Baltic Shipping, as a proposal for a flagship project within the Action Plan of the strategy. The aim of this project was to contribute to turning the Baltic Sea Region into Europe's maritime best practice region by 2015. The project is supported by Baltic Development Forum, the Baltic Sea Commission (CPMR), the B7 Baltic Islands Network, Euro region Baltic and the Union of the Baltic Cities. All components of the project are included in the EU Commission Action Plan adopted by the European Council. One of the 15 priority areas of the Action Plan is entitled "To become a model region of clean shipping". Other projects and initiatives supported by the BSSSC include Baltic Master II, Transbaltic, New Bridges and Involve - strengthening multi-level governance.

The Chairmanship of the Westpomeranian Region 2011–2012 in BSSSC

BSSSC continues its strong involvement in the implementation of the EU Baltic Sea Region strategy during the West Pomeranian Chairmanship 2011-2012. The 19th BSSSC Annual Conference in Szczecin in October 2011 focused on *The EU Strategy for the Baltic Sea Region and the Cohesion Policy – expectations and the role of the regions in the BSR.*

In June 2011, the BSSSC presented a position paper to the EU Commission on the impact the EU Baltic Sea Region strategy has had on regional cooperation. Some of the key points addressed in the paper include:

- The BSSC welcomes the strong positive impact the strategy has on collaboration in the Region, but sees this effect to be stronger on the national than on the regional level. BSSSC calls for broader involvement of the regions in the implementation of the Action Plan via new Priority Area coordinators and new project leaders. The BSSSC also emphasizes the importance of giving regions and municipalities the opportunity to constructively contribute to the formulation of objectives and the actions needed to realize them in relation to the strategy.
- The BSSC acknowledges the joint decision between the EU and stakeholders across the Baltic Sea Region to fund the current phase of implementation through existing tools, but views the lack of dedicated financing structures as a key barrier. The BSSSC argues for an inclusion of macroregional strategies like the one for the Baltic Sea Region in the new structural funds planning period starting in 2013, and for an explicit connection between national structural fund strategies and the objectives of the Baltic Sea Region strategy.
- The BSSSC underlines that the aims of the strategy cannot be realized without including countries outside the EU, and views the current involvement of Russia via the Northern Dimension as insufficient and ineffective. The BSSSC suggests the development of a clear model for the participation of non-EU members as partners in the Baltic Sea Region.

The BSSSC paper also makes suggestions to improve the operational management of the strategy implementation, including communication, coordination, and project management (http://www.bsssc.com/upload/dokumenty/f_176.pdf).

The **Union of the Baltic Cities** (UBC; www.ubc.net) is a network of over 100 cities that collaborate on a wide range of political, economic, social, cultural, and environmental issues. UBC promotes the exchange of know-how and experiences between the cities through seminars, courses, and publications. Its many projects are carried out through thirteen different Working Commissions.

UBC adopted its new Strategy 2010-2015 at the X General Conference in Kristiansand, Norway, 24-25 September 2009. Since then, the UBC has been working to face the tasks listed in the Strategy to make the organization more recognized and efficient. UBC strategy task forces on communication/marketing and on expert exchange were established. A new Commission on Local Safety has been created. The UBC further consolidated its network, launched new projects and political initiatives, and organized a number of conferences, seminars, and events.

One of the main strategic aims of the UBC in the reported period was to represent cities in the EU Baltic Sea Region strategy process. The UBC has been involved in the implementation of several flagship projects listed in the EU Baltic Sea Region strategy's Action Plan.

An UBC position on the special role of cities in the EU Baltic Sea Region strategy paper was submitted to DG Regio in November 2008. The UBC and other Baltic organizations, namely BSSSC, B7, CPMR Baltic Sea Commission, Baltic Development Forum, and Euroregion Baltic, prepared also a joint statement on the EU Strategy for the Baltic Sea Region to the EU Commission. In 2011, the UBC presented a joint position paper with BSSSC and B7 on the European Union budget for Cohesion Policy 2014-2020, emphasizing the fact that the EU strategy for the Baltic Sea Region needs to be backed up financially.

The UBC and UBC member cities participated actively in the EU Baltic Sea Region process, including the first Annual Forum of the EU Strategy for the Baltic Sea Region in Tallinn in October 2010. The UBC is actively involved in a number of projects that are part of the EU Baltic Sea Region strategy, including four flagship projects:

- "Anticipate regional and local impacts of climate change through research" (BALTADAPT) with Umea as a UBC representative
- "Promote young entrepreneurs" with the Commissions on Education and Business Cooperation as UBC representatives
- "Make the Baltic Sea an Eco-efficient region" (EcoRegion) with the Commission on Environment as a UBC representative
- "Complete the agreed priority transport infrastructures" with Liepaja as a UBC representative
- "Create a network of sustainable cities and villages" with the Commission on Environment as a UBC representative
- InnoShip with the Commission on Environment as a UBC representative

The UBC Strategy 2010-2015 adopted in 2009 set strengthening member cities' participation, energizing and streamlining the UBC commissions' work, improving the communication and marketing strategy, and launching an expert exchange program as the main tasks set for the Union by its new Strategy. Task forces on Communication & Marketing Strategy (under the leadership of Kiel and Kristiansand) and Expert Exchange (Jyväskylä and Gdynia) were established in March 2011.

The UBC has been working to strengthen the cooperation with other Baltic organizations, namely BaltMet and Baltic Development Forum. To strengthening member city participation in UBC activities, the creation of a new political platform of the local authorities, the Baltic Sea Urban Forum, has been discussed. A launch event is planned to be organized next year.

The **Baltic Metropoles Network** (BaltMet; www.baltmet.org) represents ten capitals and large metropolitan cities from around the Baltic Sea Region. In the years 2011-2012, the Chairmanship rests with the City of Warsaw. The main goal of the network is to promote innovation and com-

petitiveness in the Baltic Sea Region by engaging cities, as well as academic and business partners, into close cooperation. BaltMet's current four strategic focus areas were described in the 2011-2012 BaltMet action plan as

- Innovation as a source of prosperity
- Competitiveness and cohesion
- Accessibility and logistics
- Sustainable development in a healthy/sane environment.

In line with the EU Baltic Sea Region strategy, BaltMet has initiated various projects in the past few years. BaltMet partners have been involved in *Creative Metropoles*, which has showcased the key elements of a well-functioning, focused, flexible and efficient public support system for creative industries in eleven participating cities. The project has focused on experience exchange among the involved municipalities in order to increase the understanding among the elected decision-makers and the executive level of creative industries – their role in the overall economy, how they work – as well as increase awareness of different policies and approaches that have a positive impact on the growth and development of the creative sector. A follow-up project proposal has been submitted to the INTERREG IVC program. Its main focus areas are policies and support measures that enable cross-innovation and creative spillovers between creative sectors and other industries (www.creativemetropoles.eu).

Baltic Sea InnoNet Centres (BaSIC) identifies, selects, trains, and coaches fast-growing innovative SMEs, aiming at providing them harmonized access to markets and enabling their access to finance for internationalization and growth. The project consortium consists of leading science parks, incubators and innovation facilitators, having strong support by the ten Baltic Sea Capital Regions. The project furthers the regional links among enterprise support centers, science parks, and clusters in the Baltic Sea Region metropolises. Joint marketing and event calendars provide an opportunity for SMEs to find the most important events, expositions, and conferences for their business activities. Selected road shows in the Region support the promotion. During the pilot phase (project duration) there will be a minimum of 30 trained SMEs, three brokerage events (matching events for companies), and three international training courses. To coach internationalization of SMEs, nine market access points (MAP) throughout the Baltic Sea Capital Regions will be installed (www.basic-net.eu).

BaltMet Promo is a major flagship project aimed at contributing to regional branding and identity building. Helsinki launched preparations for the project in the autumn of 2007. In September 2009, the project was granted EU funding of EUR 2.8 million from the BSR Programme for a two-year pilot phase, 2010-2011. Helsinki submitted a follow-up project proposal called Baltmet Brand-Id in March 2011 to the Baltic Sea program call. The project is carried out in partnership of the cities of Helsinki, Berlin, Riga, Vilnius and Warsaw, together with their local partners from development agencies and universities. Baltic Development Forum (BDF) is in charge of initiating a series of policy dialogues on promoting and branding the Region. The project is supported by associate organizations from Copenhagen, Malmö, Oslo, St. Petersburg, and Tallinn. 25 other organizations – including Baltic Sea Region networks, national investment and tourism promotion agencies and cultural institutions – have expressed their interest in supporting the project. Baltic Metropoles and BDF co-ordinate several horizontal activities that are part of the EU Strategy for the Baltic Sea Region and related to "regional identity building" through this project (www.baltmet-promo.net).

Since 2010, BaltMet partners work on the *Rail Baltica Growth Corridor (RBGC)*. The project aims to improve the competitiveness and accessibility of cities and regions in the Eastern Baltic Sea Region through increased interaction and cooperation. RBGC creates a cooperation and service platform that serves the needs of the transport sector in line with green growth corridor principles. The project partnership consists of 21 partners representing cities, regional authorities, and research institutes, as well as ministries and national railways as associated organizations. RBGC is linked to the wider concept of Rail Baltica – a railway line to connect the Eastern Baltic Sea Region from north to south branching from St. Petersburg, Helsinki, Tallinn, Riga, Kaunas and Warsaw to Berlin (http://www.rbgc.eu/).

Clean Baltic Sea Shipping aims at actively reducing the negative impact on the environment caused by an increase in sea traffic in the Baltic Sea, especially from cruise vessels. The project is driven by a consortium of 21 partners representing stakeholders along the triple helix concept, i.e. local and regional governments, port organizations, universities and NGOs. The partnership covers political interests, strategic needs for harmonization, technical generalization and pilot projects as well as the need for supporting investigations.

Euroregion Baltic

Euroregion Baltic (ERB, www.euroregionbaltic.eu) is a platform for cross-border cooperation of eight regions from Denmark, Lithuania, Poland, Russia and Sweden in the south-east of the Baltic Sea Region.

The ERB was the first Euroregion to have formally included a partner from the Russian Federation. In 2005 ERB partners adopted a long-term development strategy based on four strategic priorities, including economic and social development, implementation of the EU policies regarding environmental protection and promotion of renewable energy sources, as well as improving the infrastructures in order to provide better access to the Trans European transport networks. In 2010 ERB stakeholders conducted the cooperation review process which resulted in the adoption of the ERB 2020 Agenda.

Euroregion Baltic has taken active part in the implementation of the EU Baltic Sea Region strategy. Between 2009 and 2011 ERB partnerships have successfully implemented projects within the South Baltic CBC Programme:

- *MOMENT* promotes improved management with water and local/regional preparedness for implementation of the Water Framework Directive and Baltic Sea Action Plan.
- *Youth Cross-border Cooperation and Communication (YC3)* allows young representatives from the ERB member regions to work together on creating a platform to exchange ideas and develop policy proposals.
- *DISKE* aims at intensifying cross-border relations between innovative SMEs and strengthening their competitiveness through cooperation of science and technology parks, incubators, local authorities and academia.

The Regional Council in Kalmar County (one of the ERB membersorganizations) and Regional Council in Västerbotten in Sweden have proposed a new horizontal action entitled *"Strengthening multi-level governance, place-based spatial planning and sustainable development".* Teistnew horizontal action, approved by the Commission and under further development at the moment, will among other things establish *Baltic Dialogue*, allowing actors at all levels of governance in the Baltic Sea Region to consolidate findings and disseminate good methods and experiences. Another proposal for a new flagship project under the title of "Informal learning and mobility for young people" has been proposed by the ERB Youth Board and is currentlytawaiting a decision by the High Level Group.

In October 2010 ERB established a special task force to enhance the role of ERB as a stakeholder of the strategy through monitoring its implementation and attending its annual fora. ERB actively participated in the Strategy's first Annual Forum in Tallinn in October 2010 and will also attend the 2nd Forum in Gdańsk in October 2011. The Task Force prepared a discussion paper on the implementation process of the strategy which was presented in March 2011. A position paper with recommendations on improving the implementation of the strategydwas adopted by the ERB Executive Board in September 2011.

ScanBalt BORDERLESS BIOTECH

ScanBalt (www.scanbalt.org) is a bottom-up Baltic Sea Region network of clusters, companies, research institutions, public authorities, and other organizations in the field of health and life sciences. ScanBalt has attracted or assisted directly to attract more than EUR 15m to coordinated activities for the development of ScanBalt BioRegion. Many more projects have been launched in the member regions with the support of ScanBalt.

ScanBalt's new strategy for 2012 – 2015 "ScanBalt BioRegion: Smart Growth, Sustainable Development and Specialization on Top of

Europe towards EU 2020" defines three focus areas to promote the development of the ScanBalt BioRegion as a globally competitive macro-region and innovation market:

- EU BSR Strategy and EU2020
- Communication, Visibility, and Internationalization
- Member Services and Organizational Development towards triple helix 3.0 and cluster excellence

In each focus area specific action lines are developed according to needs and opportunities. The new strategy intends to further strengthen support and service to the members; enhance decentralization, regional involvement and specialization, and strengthen ScanBalt BioRegion as a leaver to implement the EU Baltic Sea Region strategy and achieve the EU2020 objectives.

Health Economy provides an opportunity to make the Baltic Sea Region a global frontrunner. In October 2009 the *ScanBalt Health Region* (SBHR) became a flagship project within the EU Baltic Sea Region strategy. Its mission is to promote health of the citizens, reduce costs of the health care systems, and strengthen health economy in the Region (www.scanbalt.org/projects/scanbalt+health+region). SBHR has launched "Baltic Sea Health Region - Business acceleration support and training bridging innovative SMEs and health care organisations to strengthen BSR Health Economy" (acronym "BSHR HealthPort"). The BSHR HealthPort is co-funded by the Baltic Sea Region programme 2007-2013 and encompasses 9 partners together with 15 associated partners (coordinator: ScanBalt). BSHR HealthPort is focused on the following challenges of the Health Economy:

- Insufficient exploitation of ideas from health care researchers and practitioners
- Procurement practices that limits access of SMEs to the BSR health care market
- Insufficient innovation competencies of health care providers and SMEs and cultural differences across the Baltic Sea Region

A *HealthPort Innovation Competition* was launched in May 2011 to boost the commercial utilization of ideas arising from the clinical environment and healthcare research. Awards were granted to the winning ideas at the 10th ScanBalt Forum in September 2011. A key delivery at the end of BSHR HealthPort is a Health Economy Innovation agenda for the BSHR.

Another project working under the SBHR umbrella is *Eco4Life*. Partners from Szczecin in Poland, Klaipeda in Lithuania, and Greifswald in Germany as well as other associated partners promote the regional potential and bundle their strengths to create a strong and competitive South Baltic Region by mobilizing cross border cooperation in science and business (www.eco4life.info/).

ScanBalt is partner in the project „Submariner" to ensure that a stable network is available after the project financed by the Baltic Sea programme 2007 – 2013 has been finalized. The project evaluates and leverages new technologies and knowledge about the use of marine ecosystems in an environmentally friendly and economically attractive way for the Baltic Sea Region to become a model region for sustainable sea management. Submariner is coordinated by the Marine Institute of Gdansk (www.submariner-project.eu/).

ScanBalt has together with ScanBalt Health Region released position papers on "EU cohesion policies and the importance of macro-regions and regional clusters for smart growth and smart specialization", on "Healthy Ageing: from biological fundaments to clinical solutions", and on "EU Framework Program 8 and the role of macro regions" (www.scanbalt.org/press/news+archive/view?id=2611).

In order to strengthen ScanBalt Health Region/ScanBalt BioRegion, a thematic ScanBalt liaison office for Healthy Ageing has been launched at the Healthy Ageing Networks of Northern Netherlands (HANNN). Other liaison offices are located in Gdansk (Biobaltica), Tartu (Tartu Biotechnology Park), and Copenhagen (Biopeople).

ScanBalt Academy (SBA) continues to connect distinguished and prominent life scientists from academia, industry, and government. SBA acts as an external advisory board to ScanBalt and has an important ambassadorial role. May 2011 SBA became an independent network with its own statutes, governance, and financing in order to strengthen its role and importance.

BCCA
BALTIC SEA CHAMBERS OF COMMERCE ASSOCIATION

The **Baltic Sea Chambers of Commerce Association** (BCCA) is an organization of 50 Chambers of Commerce across the Baltic Sea Region. Since 2002 the Presidency and General Secretariat of the BCCA has been with the Chamber of Commerce and Industry of Southern Sweden in Malmö. Its main task is to give the business community of the Region a common voice.

In 2011 interest has been focusing on cluster policy and, during the second half of the year, the BCCA will among other things study benefits of new approaches to e-commerce, a digital agenda for the Baltic Sea Region and the EU. A new project on this topic has been launched in collaboration with BDF. In the longer term, BCCA is pushing for policies to leverage a number of key infrastructure investments that are under way. The BCCA also keenly supports and takes part in a promising project spearheaded by the Hamburg Chamber of Commerce, and the HWWI, which will scrutinize the impact of factors such as urban development and demography on the Baltic Sea Region.

Baltic Development Forum

sustainable growth · innovation · competitiveness

The **Baltic Development Forum** (BDF; www.bdforum.org) is an independent networking organization for business, governments, regional organizations, academia, and the media to discuss and collaborate on issues of regional importance.

As in previous years, the EU's Baltic Sea Region strategy process is a key priority for BDF. The 13th BDF Summit is organized together with European Commission's 2nd Annual Forum on the EU Strategy 24-26 October in Gdansk, Poland. BDF's involvement in the EU strategy includes implementation of several (flagship) projects. BDF is using its deep network of business leaders across the Region to increase the involvement of the business sector in the EU Baltic Sea Region strategy. BDF has submitted a proposal on how more people (a Baltic Sea regional "general public") could receive independent information on regional news and general issues, including information on the EU Strategy. BDF has taken active part in organizing regional conferences in 2011 to link the EU Baltic Sea Region strategy more closely to the Europe 2020 Strategy. Together with regional and private sector partners, BDF will develop concrete proposals on how the EU's digital agenda can be promoted on a regional level and provide inspiration to the wider EU in implementing this important growth initiative.

BDF has published a comparative report on the BSR countries' policies to promote women's entrepreneurship as a "strategic action" area of cooperation - "National and Cross-national Policies on Women's Entrepreneurship in the Baltic Sea Region – a Comparative Perspective".

BDF's report on "Promotion of Trade and Investments in the Baltic Sea Region – on opportunities for cooperation between trade and investment agencies" presents recommendations on how the Region can improve its position through joint action. In this context BDF also participates in the BaltMet Promo project.

In November 2010 BDF co-organized a conference on e-mobility for students and researchers in the Baltic Sea Region. A conference report has given recommendations on the process ahead in this field.

BDF has published a report on regional identity, investigating from different perspectives, academic schools and research traditions whether the peoples of the Baltic Sea Region have developed common characteristics and traditions throughout history.

BDF maintains and develops close links to Russian partners in the Baltic Sea Region, a topic identified as a priority area during the 2010 consultations with BDF's advisory board. BDF will place relations with Russia and especially Kaliningrad region high on its agenda by taking initiatives to develop closer cooperation in the energy sector. BDF is following up on past activities related to the 2010 BDF report on sustainable energy scenarios for Kaliningrad and its neighbors.

BDF is establishing a tighter network of researchers in Baltic Sea affairs, which is starting to bear fruit. A concrete example is the *2011 Political State of the Region Report*, building on contributions from a wide network of academics

from all parts of the Baltic Sea Region. The idea is to complement this State of Region Report with a political dimension. A semi-permanent regional think-tank to animate the debate and provide input to the EU Strategy for the Region and the national decision-making is a longer-term ambition.

Baltic Sea Region
Programme 2007–2013

The **EU Baltic Sea Region Programme 2007-2013** (the Programme; www.eu.baltic.net) was set up as one of 13 European transnational cooperation programs. The strategic objective of the Programme is to strengthen the development of a sustainable, competitive, and territorially integrated Baltic Sea Region by connecting potentials over the borders.

The Baltic Sea Region Programme has committed most of its currently available funds and the majority of its projects are in the middle of their implementation. After four calls of applications EUR 220m have been allocated to 80 transnational cooperation projects.

The Programme with its unique character covering the entire Baltic Sea Region has played a major role in supporting the initial implementation phase of the EU Baltic Sea Region strategy and action plan. By their nature, most of the projects co-financed by the Programme contribute to one of the priority areas addressed by the EU Strategy. Flagship project promoters and the Priority Area Coordinators quickly discovered the Programme as a suitable financing instrument for transnational activities. In the two final calls of the Programme, special focus was given to the flagship projects of the Strategy. Currently the Programme is co-financing 14 flagship projects set out in the Action Plan. In addition, it is co-financing 21 projects that are part of larger flagship projects and two so-called horizontal actions of the Action Plan.

The flagship projects co-funded by the Programme are dealing with topics such as innovations in SMEs for sustainable production, e-health, e-navigation, pollution of Baltic Sea waters, and bioenergy. The limited Programme resources do not allow for a contribution to major investments described in the EU Strategy. Instead the projects funded by the Programme often support a preparatory phase or supporting actions for such investments.

A renewed Cohesion Policy should make better use of this already existing transnational financial instrument as one of the most suitable tools to implement the actions of the EU Strategy. The preparation of the next funding period post-2013 has already started; the Programme will actively contribute with its expertise and experiences.

Sida
Baltic Sea Unit

Since its start in 2005, the Swedish International Development Cooperation Agency's Baltic Sea Unit (Sida Baltic Sea Unit; www.sida.se/balticseaunit), a government agency based in Visby on the island of Gotland, has been actively promoting cooperation across the Baltic Sea.

The unit´s toolkit consists of financial support, advice, and communication activities. The funds paid out are generally seed money to be used for starting up collaboration, for instance making a pilot study, holding a conference or writing an application for EU-funding.

Activities have so far concentrated on cooperation with Poland, Lithuania, Latvia, Estonia, and Russia (North West). In one third of the projects supported in 2010 all of these countries were involved. Other countries in the Region can also participate, but are not eligible for financial support. The applicant and lead partner of the project should be Swedish and the project should involve partners from at least two more countries in the Baltic Sea Region. The average number of participants in a project is four. The actors are municipalities, regions, state agencies, NGO´s, and universities. Since its start more than 500 collaboration projects have received support from the Baltic Sea Unit. An important part of the support is the dialogue between the applicants and the program officers to help developing the project, mobilizing EU-financing, and finding collaboration partners.

Since the adoption of the EU Baltic Sea Region strategy in 2009, the implementation of

the strategy has been an important part of the unit´s operation. Many of the flagship projects of the strategy have received initial support from the Baltic Sea Unit. The unit is also active and full participant in some strategic EU projects.

Following a government decision, the Baltic Sea Unit will in January 2012 move from the Swedish International Development Cooperation Agency, Sida, to the Swedish Institute, SI, and merge its activities with the Baltic Sea-related activities of the SI (academic collaboration and business networks). The focus of the extended mission is to contribute to enhanced relations and collaborations aiming at promoting an environmentally and socially sustainable growth and development in the Baltic Sea Region and its neighborhood. The thematic focus shall be environment (sustainability/CSR and environment/energy), society (education/research, civil security and health), and business (innovation and regional development). SI shall also contribute to the implementation of the EU Baltic Sea Region strategy by supporting activities in the action plan of the strategy. The geographic scope for the financial support shall continue to be cooperation with the five above-mentioned countries, with the addition of support to regional cooperation with Eastern Partnership countries. Sweden's Baltic Sea support will continue to have a staff of 15 in Visby.

SUOMEN ITÄMERI-INSTITUUTTI
THE BALTIC INSTITUTE OF FINLAND

The **Baltic Institute of Finland** (BIF; www.baltic.org) is a leading collaborative body for the Baltic Sea Region in Finland. Since its launch in 1994, BIF has promoted collaboration projects in the Baltic Sea Region and facilitated the participation of Finnish organizations. The Baltic Institute of Finland is a network-based organization, and its principal focus is on planning and coordinating collaborative projects and maintaining an extensive network of collaborators in the Baltic Sea region.

In 2010 BIF was involved in thirteen collaborative projects in the Baltic Sea Region and organized around 70 events in the Region and in Brussels. In recent years BIF has concentrated on innovation-related projects like BSR InnoShip, BSR InnoReg, and SPb InnoReg Interreg projects.

BIF has been involved in the EU Baltic Sea Region strategy process since 2005. BIF is strongly involved in the implementation of the strategy and its flagship projects. It is leading one flagship project (BSR InnoShip) and is involved in three innovation and SME development related flagships: BSR Stars, BSR QUICK, and Baltic Supply. The EU Baltic Sea Region strategy flagship projects have provided a stronger policy framework, better EU level dissemination channels, and better coordination between different actions and stakeholders.

The BIF-lead "BSR InnoShip - Baltic Sea cooperation for reducing ship and port emissions through knowledge and innovation-based competitiveness" project combines environmental and economic aspects. It aims to decrease atmospheric emissions of shipping and port operations. Leading maritime stakeholders from all BSR countries are represented among the project's 19 partners and 24 associated partners. The EUR 3.6m project is funded by the EU Baltic Sea Region Programme 2007-2013 and will be implemented in 2010-2013.

BIF has been closely involved in the preparation of the Vinnova-lead BSR Stars project (see later in this Report). BIF is also represented in the High Level Group (HLG) of BSR Stars. Under the BSR Stars umbrella, BIF has been involved in the preparation of the "WIN - Women in Innovation" project. The WIN project, led by the County Administrative Board of Östergötland, Sweden, aims to broaden the concept of innovation towards social and service innovations as well as the inclusion of the third sector and civil society.

The EU Baltic Sea Region strategy has offered a valuable framework also for projects without flagship status. «BSR InnoReg - Strengthening Innovation Governance in Baltic Non-metropolitan Regions through Transnational Cooperation» project, led by BIF, is a successful example of such projects. BSR InnoReg will be the first finalized project co-financed by the EU Baltic Sea Region Programme 2007-2013, prepared and implemented fully in line with the strategy. The Baltic Innovation Policy Memorandum resulting from this

project was published in Brussels in June 2011. The Memorandum encourages non-metropolitan regions to invest in smart, sustainable, and inclusive growth and to make long-term commitments to regional innovation cooperation.

BIF has been involved in the preparation of the Interreg IVC fourth call project proposal «TRES - Towards Regional specialization for Smart growth spirit» in March 2011. Through the BIF involvement, TRES will utilize and disseminate Europe-wide experiences and good practices with those developed in the Baltic Sea Region.

pan-european institute

The Pan-European Institute (PEI), founded in 1987, is an academic research center at the Turku School of Economics, the University of Turku, Finland. The PEI analyzes the economic development in the Baltic Sea Region, with a particular focus on Russia and Belarus.

PEI researches have recently concentrated on issues like FDI, regional development, innovation, and energy in the Baltic Sea region. The PEI staff has frequently acted as experts of the Finnish institutions and foreign ones, such as the Prime Minister's Office, several Finnish ministries and the Parliament of Finland, the European Commission, the European Parliament, and the United Nations. Since 2004, PEI produces the quarterly Baltic Rim Economies (BRE) review. Close to 1000 leading experts, including EU commissioners, ministers, members of parliaments, CEOs of leading corporations, academics and researchers, have contributed articles to the review (www.tse.fi/pei).

Centrum Balticum is Finland's think-tank on the Baltic Sea Region. In 2007 the City of Turku, together with four other Finnish cities, three universities based in Turku, and the Regional Council of Southwest Finland, established the Centre. Centrum Balticum organizes annually the Baltic Sea Forum for the Finnish experts. Furthermore, it invites Finland's leading experts to write a weekly Centrum Balticum Blog dealing with the Baltic Sea Region issues, and publishes them at the Centre's website. Also, Centrum Balticum actively contributes to the Turku Process, a process aiming at bringing Russia's Baltic regions into closer interaction with the EU's Baltic Sea region policy (http://www.centrumbalticum.org/en/).

Assessment

The Baltic Sea Region continues to be fortunate to have a rich network of regional institutions, networks, and supporting structures. Their activities, in the past often criticized as redundant and uncoordinated, are getting increasingly aligned. The EU Baltic Sea Region strategy process has been of critical importance in making this significant step forward. The huge asset that this institutional structure has becomes especially clear when comparing the Baltic Sea Region with other regions such as the Danube Region.

Much has been achieved, but it is still not obvious that the current institutional structure is the most effective or complete. So far, existing organizations have realigned around the objectives and action agenda of the EU Baltic Sea Region. Until now, there has been only limited restructuring of these organizations, although this process is now increasingly getting under way as the examples of the CBSS and VASAB suggest. The weaknesses in the existing portfolio of organizations, especially the lack of a powerful voice of the private sector, remain evident. There is also no clear architecture for the systematic coordination across organizations, despite the positive impact of the EU Baltic Sea Region strategy process and the efforts of network organizations like the BDF.

2. International financial institutions: Activities in the Baltic Sea Region

International financial institutions (IFI) are an important source for financing projects to upgrade national and regional competitiveness. The key IFIs active in competitiveness-related projects across the Baltic Sea Region are the European Investment Bank (EIB), its partner organization the European Investment Fund (EIF), the Nordic Investment Bank (NIB), and the European Bank for Reconstruction and Development (EBRD).

2.1 European Investment Bank (EIB)

In 2010 the level of EIB's lending activities in the Baltic Sea Region remained similar to 2009. The total volume of signed loans to the BSR was EUR 11.2bn (EUR 11.8 in 2009). Over the last five years (2006-2010) the annual lending volume has doubled from around EUR 4-5bn to a level of EUR 10-11bn. The largest recipient country is Poland, which received 45% of the EIB loans granted in the Baltic Sea Region in this period, followed by Sweden 16% and the concerned Bundesländer in Germany 13%. The most significant sector in Poland is the transport sector which received 38% of the EIB loans to Poland. The remaining part was evenly distributed among the other sectors. In the other BSR countries, i.e. in the three Nordic countries Denmark, Finland and Sweden, the dominating sector is industry. The EIB's lending objectives supports the activities in the region in line with the objectives of the EU Baltic Sea Region strategy, to make the Baltic Sea Region environmentally sustainable, prosperous, accessible and attractive, and safe and secure.

Most of the EIB-financed projects in the Region support the EU Strategy for the BSR, many projects being classified as flagship projects or projects directly supporting the EU´s key objectives of the Strategy.

EIB lending in the region 2006-2010

SIGNATURES	2006	2007	2008	2009	2010
Denmark	32	209	379	422	387
Estonia	40	0	87	841	75
Finland	670	613	710	1145	1000
Germany [1)]	911	977	1633	1672	1251
Latvia	35	35	860	285	100
Lithuania	79	20	10	1169	20
Poland (total)	2031	2281	2837	4784	5475
Sweden	282	713	1311	1135	2608
EFTA					
Iceland	0	146	0	170	0
Norway	310	0	0	0	50
EASTERN EUROPE					
Russia (total)	0	0	0	133	250
Total	**4390**	**4994**	**7827**	**11756**	**11216**

1) in the Länder Berlin, Brandenburg, Hamburg, Mecklenburg-Vorpommern and Schleswig-Holstein

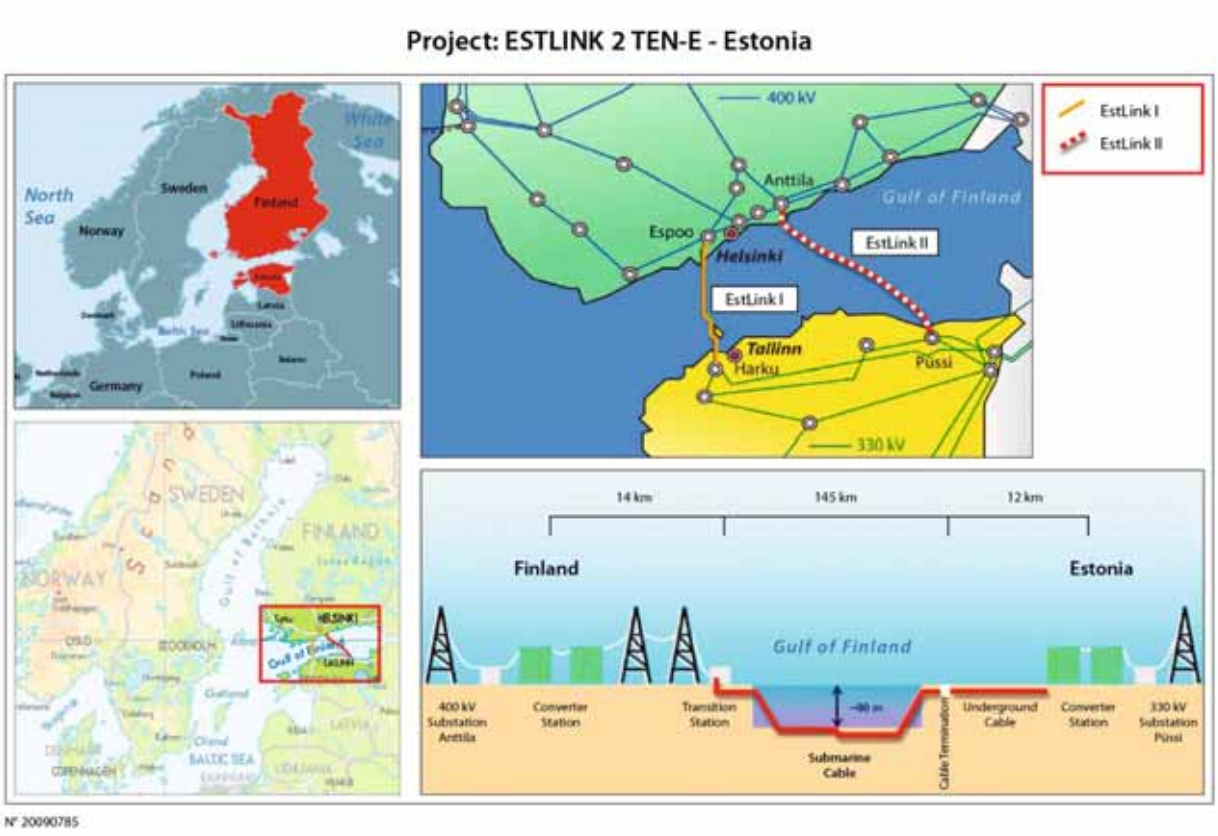
An important part of the EU Baltic Sea Region strategy is the reorientation of existing EU funded programs in the Region to make them support the strategy. The EIB co-financing of EU funded programs has been an important vehicle in promoting a number of important investments in this fast growing Region. The EIB has approved a number of projects or programs that are wholly or partly co-financed with EU Structural Funds. For the 2007-2013 programming period, EIB has so far approved 15 Structural Programme Loans (SPLs) with a total amount of EUR 5.7bn in the Baltic Sea Region. As the EIB on average finances some 13% of the total project cost in the case of SPL, the EIB financing supports a total investment cost of EUR 42bn in the Region. Many of the public investments included in these programmes have been essential to counter-act the economic and financial crisis.

In 2010 the Bank has continued to promote the idea of an Implementation Facility, a Technical Assistance facility for the implementation of the EU Baltic Sea Region strategy. Small and medium sized projects in the Region often have difficulties to obtain the necessary Technical Assistance for the timely and efficient implementation of the projects. The EIB has therefore proposed to the European Commission and the Member States in the Region to establish a separate Implementation Facility, which could provide the necessary technical and financial expertise. Such an Implementation Facility could assist in the launch of new studies, in providing advice on procurement documents, and in removing other bottlenecks in the implementation process. The proposal aims at starting a pilot project for 2011-2013 with a total amount of EUR 10m.

2007-2013 programming period

Country	Name of operation	Project cost m EUR	Approved EIB loans m EUR	Signed m EUR	Share of EIB loan out of total project cost %
	Approved programmes				
Estonia	EU Funds Co-Financing 2007-2013 (EST)	4 331	550	550	13%
Latvia	EU Funds Co-Financing 2007-2013 (LV)	5 834	750	750	13%
Lithuania	EU Funds Co-Financing 2007-2013 (LT)	9 564	1 132	1 132	12%
Poland	EU Funds Co-Financing 2007-2013 (PL)	19 305	2 000	2 000	10%
Poland	National Environmental Protection Fund*	300	150	121	50%
Poland	Mazovia Regional Infrastructure*	400	180	88	45%
Poland	Poznan Municipal Infrastructure*	209	81	81	39%
Poland	Poznan Municipal Infrastructure III*	333	145	145	44%
Poland	Gdansk Municipal Infrastructure II*	368	145	64	39%
Poland	Lodz Regional Infrastructure*	323	106	106	33%
Poland	Lodz Municipal Roads*	240	71	18	30%
Poland	Lublin Municipal Infrastructure*	386	126	126	33%
Poland	Malopolska Regional Infrastructure*	318	72	38	23%
Poland	Szczecin Municpal Infrastructure III*	185	75	75	41%
Poland	Zachodniopomorskie Regional Framework*	284	84	84	30%
	Total approved projects	**42 380**	**5 667**	**5 272**	**13%**

(*) Partly co-financed with the Structural Funds regional and municipal investment framework operation.



Project Examples, EIB loans approved in 2010

Estlink 2, power cable between Finland and Estonia

This project contributes to make Estonia and the other Baltic States more prosperous through improving the energy security in the Region. It is expected that the energy security in the Baltic States will improve greatly thanks to a 650 MW power cable linking Estonia and Finland, which will be completed by 2014. The EIB has provided an EUR 75m loan to Estonian grid operator Elering to part-finance the project. Estlink 2 will almost triple transmission capacity between the two countries. By establishing a higher capacity connection between the Baltic States and Finland and the rest of the Nordic grid, Estlink 2 will lead to less congestion in an existing cable, lower price discrepancies, and help ensure supply at times of peak loads. Estlink 2 is also one of the key projects under the Baltic Energy Market Interconnection Plan (BEMIP), which was launched at the initiative of the EU Commission in 2008.

Wrocław Water and Wastewater Project, Poland

Environmental sustainability is one of the corner pillars of the EU Strategy for the Baltic Sea Region. Therefore, wastewater treatment and waste management remains high on the agenda, and the EIB has financed several projects in these sectors in the region. In 2010 the EIB approved a EUR 117m loan to the Wrocław water and wastewater

programme in Poland, which includes investments to improve drinking water supply, and collection and treatment of wastewater with the objective of achieving compliance with EU directives concerning drinking water quality and wastewater collection and effluent standards. The project will significantly improve public health and environmental protection in the Region and beyond by reducing the pollution load of the Odra River and the Baltic Sea. The EIB has financed 46% of the total cost, which is estimated at EUR 255m.

2.2 European Investment Fund (EIF)

The EIF is unique amongst European international financial institutions. It was set up in 1994 by both public and private sector shareholders, with the objective to earn an appropriate return while contributing to Community objectives. Since then EIF has become a major investor in the European venture capital markets and a key enabler of SME lending through guarantee and securitisation transactions. It has become very active across the Baltic Sea Region.

EIF wants to be a pioneer in building risk finance markets for entrepreneurship and innovation. It indirectly supports SMEs by means of equity (venture capital and private equity funds) and guarantee instruments. EIF has over EUR 15bn of funds under management. Its main shareholder is the European Investment Bank (EIB) with 61%, and the remaining shares are held by the European Community with 29% and 9% by public or private banks and financial institutions (30 from 17 countries).

Through this role, EIF has been able to play a fundamental role in the development of SME financing activities across all the members of the Baltic Sea Region. Over the last five years, EIF has built a growing portfolio of transactions with financial intermediaries that now totals over EUR 2.7 billion in commitments.

EIF's cornerstone Equity investments have continued to grow steadily across the period and over the period 2006 - 2010 reached a volume of EUR 624 million. EIF makes investments in Venture Capital Fund Managers following a thorough selection process, which catalyses additional private investors. Additionally, EIF's Guarantees and Securitisation unit created a large number of transactions totalling a commitment figure of EUR 2,106 million. These transactions involve working with Banks and other Guarantee Institutions in order to increase the level of lending to SMEs through normal banking networks.

Selected recent transactions

Imprimatur Capital

As part of EIF's role in managing the JEREMIE Holding Fund on behalf of the Government of Latvia, EIF has constructed an equity fund that utilizes Structural Funds resources in a form and format designed to stimulate seed investments and provide further rounds of financing with private investor participation. EIF then managed a 'Call for Expression of Interest' process and finally selected Imprimatur Capital to manage the 'Seed and Start-Up' fund. Imprimatur Capital is an in-

EIF signatures in the Baltic Sea region

	2006		2007		2008		2009		2010	
In EUR m	Equity	Guarantees*	Equity	Guarantees*	Equity	Guarantees*	Equity	Guarantees*	Equity	Guarantees*
EU										
Denmark	5	5	0	159	18	1	0	0	0	0
Estonia	0	0	0	0	0	0	0	0	0	0
Finland	25	37	0	0	10	0	20	0	0	0
Germany	71	48	9	270	28	200	33	49	30	450
Latvia	0	8	0	0	0	0	0	15	35	52
Lithuania	0	26	0	0	0	0	0	75	36	72
Poland	0	105	0	160	0	34	0	86	0	211
Sweden	0	43	34	0	6	0	42	0	28	0
EFTA										
Iceland	0	0	0	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	0	1	0	0
Eastern Europe										
Multi-countries in Central & Eastern Europe	50	0	15	0	23	0	41	0	65	0
Total	151	272	58	589	85	235	136	226	194	785

* Guaranteed portfolio amount

ternational seed investor in high-growth technology businesses with global market potential.

Imprimatur Capital is headquartered in London, but has a well-established office and presence in Latvia and, by managing a structured dealflow pipeline process, the first investments have begun. To date the first 5 seed investments have been made in a variety of companies and one investment has now progressed to the Start-Up stage, attracting private investor capital also. This company, Naco Technologies, is a young high-tech company based in Riga, Latvia, focused on commercializing a nano-coating technology developed at a leading research institute in Moscow, Russia. Naco Technologies' patented innovation enables nano-coatings onto a wide variety of substrate materials, with value-added coatings that are harder and more wear resistant than existing technologies and with a much quicker coating process. These results in shorter production cycles for Naco's customers and reduced friction fatigue in equipment used in sectors such as machinery and tooling, aerospace, oil and gas and others.

Chalmers Innovation Fund

Another example transaction within the Baltic Sea Region exists between EIF and the Chalmers University in Sweden. In this process, EIF made a cornerstone investment in a Swedish technology transfer fund by partnering with the Chalmers University and its incubator Chalmers Innovation. The first closing was completed at SEK 110m (approx EUR 12m) with a final target at SEK 250m (approx EUR 27m). The fund is a technology transfer vehicle partnering with Chalmers Innovation in Göteborg, Sweden. This innovative financing vehicle will invest mainly in technology companies for which Chalmers Innovation acts as the business incubator. These companies are often created with technology developed at Chalmers University of Technology. EIF's investment has enabled the creation of a leading technology transfer operation delivering significant results in terms of new company formation, but also further development of technology. This investment allows EIF to address an unmet need in the field of commercialization of intellectual property from universities. EIF has a similar transaction with the Karolinska Development Fund and is currently looking to expand the portfolio of these type of transactions across the Region.

NorthCap IVS III and Conor Technology Fund II

Under the Competitiveness and Innovation Framework Programme" (CIP), EIF has invested in two Nordic venture capital funds, which target the high-tech, ICT and software sectors. Through these two transactions EIF, as a cornerstone investor, aims to contribute to filling the funding gap that early stage companies experience in the ICT sector, and to fostering innovation and regional development.

NorthCap IVS III, which is managed by a fully independent team, focuses on technology companies in Denmark and Southern Sweden. The fund provides financial capacity and support to start-ups in a region with strong ICT activity due to the concentration of high quality education and research centers, but a decreasing presence of VCs and a lack of available funding.

Conor Technology Fund II is managed by a team with vast experience in the venture capital industry, having invested in the ICT, electronics, and software sectors in Finland for many years. Their involvement in innovative companies located in Finland, Sweden, and the Baltic states will be instrumental to the businesses growth, development, and cross-border expansion.

Future Activities

EIF considers the Baltic Sea Region to have great potential as it combines strong critical mass with a high level of market maturity and experience. EIF will continue to seek to grow the number and volume of the transactions signed for the members of the Baltic Sea Region by utilizing existing and new mandate activities as appropriate.

JEREMIE Holding Funds

EIF currently manages two JEREMIE Holding Funds on behalf of the respective Governments in Latvia and Lithuania, with a total value of EUR 301.5 million. Both these important activities have played key roles in the development of SME financing through the careful utilization of Structural Funds resources by implementing financially engineered instruments with selected financial intermediaries. Through this work, EIF has proved that the concept itself is providing direct benefits to SMEs in both countries.

Nordic Innovation Fund

EIF and EIB have recognized the need to undertake greater levels of investment activity within the Baltic Sea Region in response to access to capital bottlenecks in the wake of the crisis. EIF is currently exploring the launch of a 'Nordic Innovation Fund (NIF)' in collaboration with ministries across the region. The fund is intended to be a EUR 250m Investment Fund, creating equity investment activities to develop a well-functioning Nordic early-stage equity market. The Fund will support innovative start-up and growth companies across the five Nordic countries, implemented through a coordinated structure managed by the European Investment Fund. By combining government support with EIF human and capital resources, the initiative is expected to attract strong corporate interest from international companies seeking to in-source innovation from the wider Nordic region.

2.3 Nordic Investment Bank (NIB)

The Nordic Investment Bank (NIB) is firmly rooted in the Baltic Sea Region through its eight member countries: Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway, and Sweden. The main part of NIB's lending is targeted on the member countries of the bank as well as on the neighboring area, with annual commitments in support of investments in the Region on the level of EUR 1,5 - 2 billion over the last three years.

Approved loans	2007	2008	2009	2010
Denmark	80	373	196	137
Estonia	122	58	0	39
Finland	752	502	484	658
Latvia	225	170	0	21
Lithuania	100	59	135	20
Poland	50	150	0	74
Sweden	710	782	394	642
Iceland	139	25	0	
Norway	343	337	235	120
Russia	355	100	0	150
TOTAL	**2876**	**2556**	**1444**	**1861**

NIB provides long-term complementary financing, based on sound banking principles, to projects that strengthen competitiveness and enhance the environment. All project proposals are evaluated against the mandate outlined in the bank's strategy announced in 2006. Only those that obtain a high enough mandate rating are accepted for further consideration.

High mandate fulfillment is in NIB's experience particularly prone in certain sectors, namely environment, energy; transport, logistics and communications; and innovation. In addition the bank also lends to projects in the manufacturing and service sectors as well as provides financing through financial intermediaries to smaller projects. In 2010 environment represented one third of new commitments, including environmental loans in other sectors such as renewable energy, sustainable transport, R&D related to eco-efficiency, manufacturing, and environmental services. The Bank also provided loans to local banks as intermediaries for on-lending to small and medium-sized companies or to finance investments in smaller-scale projects such as wind turbines.

The implementation and development of renewable energy systems and technologies is another priority area for NIB. The most important renewable energy sources with regard to their energy potential are: biomass (usually with a combined heat and power output), wind power (both land-based and offshore), geothermal power, and hydropower. Hydropower development

is mainly focused on increasing the efficiency of existing plants.

Security of supply and environmental sustainability are key challenges for the energy sector in the Baltic Sea Region. Enhanced integration of regional energy transmission is a necessity, not least to enable a further increase of the share of renewable energy, and substantial long-term investments are needed in interconnectors and distribution systems. NIB is participating in a number of priority projects, among others in the context of the Baltic Energy Market Interconnection Plan (BEMIP).

In the field of climate change, NIB has set up a special lending program, the Climate Change, Energy Efficiency and Renewable Energy facility (CLEERE). Originally established in 2008 with a total framework of EUR 1,000 million, the facility was fully allocated during 2009 and increased to EUR 2,000 million in 2010. The rapid allocation of loans for projects addressing climate change mitigation and adaptation, primarily in the energy sector, but also in industry and transports, has continued and, as a consequence, the facility was extended to EUR 3, 000 million in early 2011.

NIB takes active part in the regional cooperation forums with a view to supporting the implementation of priority projects. In all strategy and program frameworks, the key issue from the financing perspective is to be able to identify bankable investment components. As experience shows, the way from the strategy level to concrete implementation is frequently long and arduous. At best, strategies and policies provide clear guidance and help to set priorities, which in turn create a good basis for investment decisions and resource mobilization, but this requires constant attention and effort.

The EU Baltic Sea Region strategy has established a new framework for this cooperation, laying down priority areas and identifying flagship projects. The priorities set out by the strategy, with its strong emphasis on the fields of environment, energy, and transport, correlate well with the focus sectors of NIB, providing a good basis for the bank to be proactively involved in supporting the implementation of the strategy. NIB is committed to this aim and is cooperating closely with EIB and other partners in this respect.

In the wider regional context, the Northern Dimension, based on an equal partnership between the European Union, Iceland, Norway, and Russia, creates an important platform for cooperation. In particular the specific partnerships, established under the Northern Dimension, provide a framework for concrete activities. NIB plays an active role in the Northern Dimension Environmental Partnership (NDEP), which is coordinating the financing of environmental projects with cross-border effects in the Baltic Sea Region, the Barents region and Northwest Russia, with projects benefitting from grants from the NDEP support fund. Up till today, all projects have been located in Russia, but recently also Belarus has been approved as country of operations for the NDEP. NIB is acting as lead bank for a number of the projects, collaborating with, among others, EBRD, EIB, and NEFCO.

A recent initiative is the establishment of the Northern Dimension Partnership on Transport and Logistics (NDPTL). The purpose of this partnership is to facilitate cooperation on and implementation of regionally important transport infrastructure and logistics projects, and particularly to remove bottlenecks from relevant corridors. Effective transport, logistics, and communications form a cornerstone of the competitiveness of the Baltic Sea Region. This applies to intra-regional transport and communication channels as well as to access links from and to the Region. The overriding goal is an effective flow of goods and people in the northern European region. NIB has actively participated in the preparatory process for the NDPTL and will continue to support the new partnership, being the host institution for the NDPTL Secretariat. A list of priority NDPTL projects is currently being developed. Implementation of these projects is expected to benefit from close collaboration with the IFIs, including in relation to PPPs that can provide an effective mechanism for harnessing private sector competence and funding capacity in support investments.

NIB supports the work of HELCOM to implement the Baltic Sea Action Plan (BSAP), which has been included as one of the priorities in the EU Strategy for the Baltic Sea Region. The aim of the plan is to restore the good ecological status of the Baltic marine environment by 2021. NIB

has set aside EUR 500 million in a special Baltic Sea Environment Financing Facility (BASE) to provide loans supplementing the financing, through national budgets and EU structural and cohesion funds, in order to finance measures that reduce pollution. As per end of May 2011 EUR 140 million had been allocated under the facility. Loans under the facility are made in the ordinary course of business in accordance with NIB's lending policies.

To support the preparation of BSAP related projects, NIB and the Nordic Environment Finance Corporation (NEFCO) took the initiative to establish a new trust fund, the "BSAP Fund", which was set up in 2009 with donor contributions, initially from Sweden and Finland aggregating some EUR 11 million. The purpose of the fund, managed jointly by NIB and NEFCO, is to assist, through grants for technical assistance, the development of bankable projects that support the implementation of the BSAP. The first projects are under implementation.

2.4 European Bank for Reconstruction and Development (EBRD)

The EBRD was established in 1991 to support the economic transformation in Eastern Europe and Central Asia through project financing for banks, industries, and businesses, including publicly owned companies. The Bank invests only in projects that could not otherwise attract financing on similar terms, and usually provides only up to a third of the total project cost.

The EBRD had over time gradually decreased its engagement in the Baltic countries and Poland. In 2009 and 2010, however, it responded to the impact of the global crisis by returning to the Region with a number of projects. In Russia, the EBRDs engagement had been growing more steadily before the crisis and was then also ramped up significantly as global financial conditions deteriorated.

	2010		2009	
	volume in EURm	number	volume in EURm	number
Estonia	0	0	20	2
Latvia	80	3	90	2
Lithuania	80	2	20	1
Poland (total)	640	20	320	12
Russia (total)	2300	60	2400	58

The activities of the EBRD in the Baltic countries and Poland focus on energy (including sustainable energy) and the financial sector. In its first transaction in Baltics, the EBRD-EIB Multilateral Carbon Credit Fund (MCCF) agreed in September 2010 to buy carbon credits from a group of wind farms managed by OÜ Nelja Energia, a renewable energy company, owned by Freenergy AS. The EBRD had in 2009 provided a EUR 19m equity investment in Freenergy to help support the development of OÜ Nelja Energia's wind farm projects. In June 2011, the EBRD announced a EUR 34.4m loan to AS Graanul Invest, a leading Estonia-based wood pellet producer. In Latvia, a EUR 85m loan was in 2010 given to Latvenergo, the state-owned energy company, to finance a new combined heat and power (CHP) plant in Riga. Co-financing for the plant came from the EIB and commercial banks. In Lithuania, the EBRD participated in 2010 in the financing of a EUR 71m project to upgrade a power plant in Elektrenai. It also signed a EUR 25m equity financing facility with energy company Dalkia for investments in Baltic municipalities. A EUR 10m convertible loan to Siauliu Bankas was aimed at expanding financing to Lithuanian small and medium-sized enterprises (SME) and co-finance investments supported by EU and Lithuanian government programs. The EBRD also made two investments in equity funds focusing on the Baltic countries. In Poland, EUR 45m was given to co-finance a 120 MW wind farm in north-west Poland, the largest in the country. Sustainable energy in Poland was also boosted by the creation of the Polish Sustainable Energy Efficiency Programme (PolSEFF) in 2010. The EUR 85m facility will expand energy efficiency lending to include small and medium-sized enterprises (SMEs) by developing long-term credit lines through local partner banks, Millennium Bank and Bank BGŻ. In Russia, investments in private sector companies and in energy efficiency have been at the forefront of EBRD's activities.

Assessment

International financial institutions (IFIs) play an important role in financing investments for upgrading regional competitiveness across the Baltic Sea Region. The EU Baltic Sea Region has played an impressive role in providing a structure for these institutions to align their loan portfolios with the Region's most important needs.

While an important step has been made, the linkages between the EU Baltic Sea Region strategy and the IFI's individual processes of evaluating projects could be strengthened. EIB, EIF, and EBRD have overall strategies as well as strategies per country to get their decisions; the NIB has developed a specific 'mandate rating' process to assess the impact of individual projects on competitiveness and the environment, its strategic objectives. Integrating the priorities set in the EU Baltic Sea Region strategy into these structures would enhance the transparency and predictability of the financing process.

3. The EU Baltic Sea Region Strategy

This section provides a perspective on the implementation of the EU Baltic Sea Region Strategy through the lens of two of the strategy's flagship projects. At the end of 2007 the European Council invited the European Commission to develop a strategy for the Baltic Sea Region. In October 2009 this strategy was then adopted, including a regularly updated action plan of about 80 flagship project. Following an interim report in 2010, the European Commission published its first implementation report in the summer of 2011 (http://ec.europa.eu/regional_policy/cooperate/baltic/index_en.cfm). In the meantime, the Commission has started to implement the concept of macroregions also in other parts of the European Union. The strategy for the Danube Region was adopted by the European Council in June 2011.

The role of the EU in the Region and of the EU strategy for the Region has been repeatedly discussed in previous State of the Region Reports. This year, we track three of the strategy's flagship projects and provide some overall commentary on the strategy's progress:

- BSRStars/StarDust on clusters and innovation
- TransBaltic on transport infrastructure
- Barriers to Trade; Internal Market on barriers to market integration

The three projects address the second and third of the four cornerstones of the EU Baltic Sea Region strategy, which have in the action agenda been translated into seventeen priority areas:

1. Environmentally sustainable (e.g. reducing pollution in the sea);
2. Prosperous (e.g. promoting innovation in small and medium enterprises);
3. Accessible and attractive (e.g. better transport links);
4. Safe and secure (e.g. improving accident response).

3.1 Case studies of selected flagship projects

BSR Stars and the StarDust project

The overall ambition of the BSR Stars flagship project is to foster sustainable growth and prosperity through innovation. Aligned with the EU 2020 Strategy, the long-term vision of BSR Stars is to establish the Baltic Sea Region as a functional region with an internationally competitive position in a number of strategically prioritized areas. The strategic idea of this umbrella program is to build on existing commercial strengths and competencies around the Region, strengthen transnational networks of companies and research institutions, and foster the development of strategic alliances and collaborative innovation projects.

The StarDust project is a first major milestone within the BSR Stars program. A total of 34 partners and 33 associated partners have been granted financial support of EUR 6.4m over a period of three years. By fostering transnational

linkages between specialized research and innovation nodes, the StarDust project aims to catalyze the formation of strategic innovation alliances and tackle major challenges shared by participating innovation nodes.

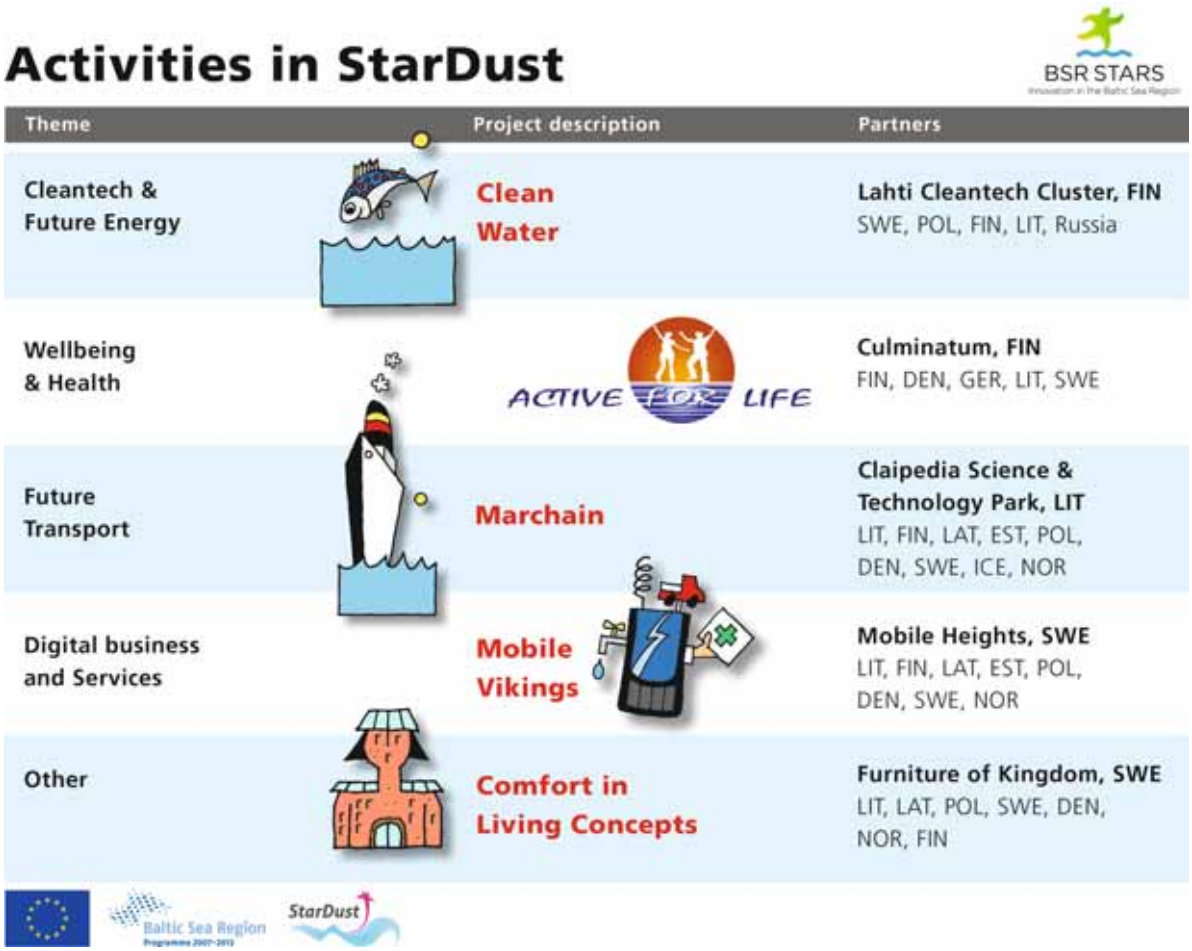
The Swedish Ministry of Enterprise, Energy, and Communication invited the ministries and agencies from the Baltic Sea Region (including Norway and Iceland) to a first meeting in April 2009 to discuss the strategic idea of cooperation around innovation. For approximately one year, 40 people from ten countries worked on creating a common transnational program. Since the summer of 2009, the program management team and the task forces have developed the detailed project design for BSR Stars. The total cost for this development and design work is estimated to have been about EUR 1m. Today, a common view on the program design has been reached and is being enacted through the StarDust project.

A High Level Group (HLG), consisting of members from all 10 countries - the eight EU Baltic Sea Region countries plus Norway and Iceland -, was established as a steering committee for the project. Each country was invited to appoint one member from a ministry and one member from the country's innovation agency. The HLG meets every second month to track progress and guide the overall direction of activities. Since the summer of 2009, the work has been organized in a program management team and in task forces. The program management team consists of a project leader from VINNOVA, task force leaders from different countries, and further team members from VINNOVA.

StarDust builds on earlier activities in the field of innovation and clusters conducted within the BSR InnoNet and BSR-CBP projects. These projects created a good platform for more ambitious transnational innovation activities. Over 300 individuals have been working together since 2006 and are now at the core of StarDust's activities.

Just as the broader BSR Stars flagship, the StarDust project aims at creating a number of globally-leading research and innovation hubs – developed by building on existing commercial strengths and specialized competencies around the BSR, and linking these research and innovation nodes through transnational projects to develop stronger critical mass, attractiveness, and international competitive positions. At the core of the StarDust project are five pilots in cross-sector domains, addressing so-called 'grand challenges' with the aim to create grand potentials for future products and services:

- *Mobile Vikings*(focused on digital business and services), led by Mobile Heights cluster initiative in Skåne, Sweden
- *Active for Life* (focused on wellbeing and health), led by the Helsinki Health and Wellbeing Centre of Expertise at Culminatum in Espoo, Finland
- *Marchain* (focused on transport), led by Klaipeda Science and Technology Park in Lithuania
- *Clean Water* (focused on clean tech and future energy), led by Lahti Cleantech cluster in Finland
- *Comfort in Living* (focused on furniture), led by IDC West in Sweden.



The StarDust project activities started in March 2011, and the five pilots have now conducted several activities aimed at developing a joint action plan and strengthening the linkages between their respective cluster/research nodes. Activities have included, for example:

- Development of a mutual understanding and a clearer picture of strengths and weaknesses in the region
- Identification of challenges when addressing a global market
- Knowledge of open innovation

A number of tools to support the pilots' activities have been developed, including:

- Tools for business intelligence (including signal sessions, market foresight and support to strategy development)
- Tools for increasing innovation capacity (including workshops on demand-driven innovation and user-driven innovation camps)
- Tools for increasing cooperation (including match-making platforms and events)
- Tools for transnational funding

The main challenge for BSR Stars over the past year has been the creation of a common understanding of the opportunities, and to turn these ideas into a program that all countries can agree on. There is strong commitment among the participants to pursue this project along the lines defined. For the next years the challenge is financing and incorporation of additional actors. Resources need to be reallocated from existing funds and programs (EU, national, and regional funds) in order to create momentum and credibility. There is also a need for a BSR fund, which can finance innovation projects in the BSR region, using the state of the art knowledge in innovation that can give benefits to the macro region concept.

Overall, three issues stick out from the experience so far:

- *It takes time* for a dispersed network of research nodes and clusters to establish a joint understanding of challenges and market opportunities as well as define their action plan.
- Strategic intelligence and interactive workshops on *collaborative innovation methods* are

helpful tools to support and speed up this initial phase.
- It is important to develop *action plans based on business needs*, and continuously have dialogue with and engage companies in the international collaboration activities

TransBaltic

The overall ambition of the TransBaltic flagship project is to enhance the regional transportation infrastructure across the Baltic Sea Region through the better integration of infrastructure planning and the implementation of joint infrastructure and transport development projects. TransBaltic aims to integrate the result of a number of previous projects into a coherent framework and to initiate selected pilot actions. The project is co-financed by the Baltic Sea Region Programme 2007-2013 and led by the Swedish region of Skåne. The project will run from June 2009 to December 2012.

TransBaltic addresses the insufficient compatibility and robustness of transport networks and logistics patterns across the Baltic Sea Region countries, which hampers the emergence of an integrated multimodal transport system in this particular macro region. Such deficiencies are regarded by several enterprises and transport operators as important barriers to economic prosperity and growth in the Region. There is a clear need of enhancing the Region's ability to serve the increasing cross-regional transport flows. Practical solutions will contribute to better transport co-modality with more integrated road, rail, and sea infrastructures, and stimulate sustainable regional development.

TransBaltic builds on the outcomes of a number of completed transnational transport projects in the Baltic Sea Region such as Inter-Baltic, Baltic Gateway, Baltic Palette, and Sustainable Transport in the Barents region. It also relates to strategic documents by several pan-Baltic initiatives, e.g. the BSSSC Framework for a BSR Multimodal Strategy, the VASAB Long-tern Development Perspective, and the Report from the BDF Round Table on Intelligent Transport and Infrastructure. It consolidates visions, master plans, and planning concepts delivered by these projects, and initiatives, into one systemic framework from the perspective of sustainable regional development and a functional gateway needs. It also further develops them through concrete pilot business cases.

TransBaltic is driven by 50 partner organizations from 11 countries around the Baltic Sea, including regional authorities, transport and logistics-related research institutions, transport operators, logistics associations, and pan-Baltic organizations, such as CMPR Baltic Sea Commission, CMPR North Sea Commission, Baltic Sea States Sub regional Cooperation, Baltic Sea Chambers of Commerce Association, Baltic Development Forum, and Baltic Ports Organization. It has also 8 organizations from Russia and 7 national transport ministries as associated partners. In addition to the joint work of the financially committed organizations, TransBaltic runs an intensive dialogue with state level authorities and private stakeholders to align the project results with the needs and expectations of transport decision-makers, operators, and users around the Baltic Sea.

The project has been granted strategic status by the authorities of the Baltic Sea Region Programme 2007-2013. It complements the transport planning harmonization measures of the national governments, by examining thematic scenarios for future transport patterns in the Region and analyzing their impact on sustainable regional growth. It identifies links and nodes important for the functional transport system of the macroregion that are not yet included in the investment plans of Baltic Sea Region countries. And it aims at analyzing the impact of intercontinental trade (e.g. freight volumes coming from Russia, China, and India in transit to Western Europe and other regions) on the geography of freight flows through the Region. A fourth intention is to discuss measures to fully integrate Russia and Belarus into the transport system of the Baltic Sea Region. Fifthly, the project should promote commercial concepts specific for the Region that may be reflected in the EU and national transport policies. And finally, the project should test the applicability of EU transport policies in the specific conditions of the Region, bearing in mind the need for its economic,

social, and territorial cohesion. Concrete targets are to:

- develop a decision support basis for regional and national investments in transport corridors across the BSR by means of pan-Baltic traffic forecasts and scenarios
- prepare a regional transport action plan with measures needed to improve the internal connectivity, interoperability, and inter modality in the BSR, and to better serve intercontinental freight flows
- demonstrate the use of specific commercial concepts (dry port network, empty container management, ICT tool for planning intermodal supply chains, training and education in port services, back-up solutions in rail freight) for national, macro regional, and EU policies
- create synergies between local, regional, national, and EU stakeholders by arranging debates on necessary horizontal measures in shaping an integrated transport system in the BSR.

Two years into the project, the project has registered a number of results. An inventory of the results from transnational Interreg projects dealing with transport and logistics and other transport development initiatives in the Baltic Sea Region has been created. Reports on the impact of EU transport policies and of planned transport investments in Russia, Belarus, Ukraine, central Asia, and China on the sustainable transport development in the Baltic Sea Region have been written. Another report discusses the future for trade between India and the Baltic Sea Region, and the implications for transport connections. The TransBaltic Policy Report 2010, presented, inter alia, results of the foresight process around the Baltic Sea on the possible transport development scenarios (incl. a green transport scenario). An umbrella structure joining TransBaltic and other relevant transport and logistics projects (with currently 9 cooperating projects) has been created for information sharing and joint activities. A Stakeholders Forum has been established as an advisory body for the Swedish Ministry of Enterprise, Energy, and Communications for strategic actions in the area of green transport corridors. Pilot solutions to transport and logistics challenges flagged up by the business community have been developed.

Overall, four issues stick out from the experience so far:

- There is a huge need to integrate the so far separated results of transport researching (funded by Framework Programmes), planning (funded by transnational Interreg programmes), and demonstration (funded by Marco Polo).
- The macro regional approach is effective in developing customized measures addressing the specific transportation and connectivity needs of the Baltic Sea Region
- The currently tested business concepts have the potential to become an important model for a new collaborative policy-making process involving public authorities, commercial actors, and research institutes
- It is crucial to involve the Region's neighbors, in particular Russia. If this fails, the Region may see a new East-West divide with disrupted transport chains and services, because of low priority given by the new EU Member States and Russia to green transport solutions.

'Barriers to Trade; Internal Market'

The overall ambition of this flagship project is to enhance the functioning of the Internal Market in the Baltic Sea Region. The project includes activities on removing barriers to the free movement of goods and services of different kinds; and on developing a platform for increased cooperation between authorities responsible for the Internal Market tools, i.e. contact points in accordance with the Services Directive and the "Goods Package", and the Solvit Network, a network of service offices that help firms and individuals across the EU who experience problems in using their Internal Market rights.

The project has been organized in five modules:

1. Identification of trade barriers in the Region
2. Cooperation on the Commission's recommendation on measures to improve the function of the Internal Market
3. Increased cooperation between Solvit centres in the Region

4. Exchange of best practice regarding the contact points for goods and services
5. Better information on the Service Directive and the "Goods Package"

Trade between SMEs in the Baltic Sea Region was identified as being below its potential. An important explanation was considered to be that national administrative burdens and incorrect application of EU legislation arise due to lack of information about the rights of free movements. The EU legislation on the "Goods Package" and the Services Directive came in to force in 2009. This legislation aimed to improve the movement of goods and services in the Internal Market. However, the implementation processes in Member States remain cumbersome. During the implementation of the Services Directive, a working group for cooperation within the Baltic States was formed. This informal group ultimately then became the nucleus for the current project.

One of the objectives set for the new project was tighter cooperation between Solvit centers – created by the Commission to help firms and individuals if they are denied their Internal Market rights - in the Region in so-called Solvit+ cases, i.e. cases where national regulation needs to be changed, because it does not correctly apply EU law. Initial efforts resulted in the creation of a network of central governmental departments responsible for the Services Directive and the Goods packages, and central authorities responsible for national Solvit centers in the Region. Each country participates in different work groups administratively supported by the European Commission in Brussels. The Ministry of Economy, Poland, and the National Board of Trade, Sweden, are joint project leaders with responsibility for specific project modules. Ten other ministries, government agencies, and other institutions are involved. The project group has met three times following the kick-off in Warsaw in June 2010. Topics discussed included best practice and information sharing, the use of the Solvit database, and the creation of a database containing all national rules affecting cross border activities.

The project participants have agreed to focus on two or three modules during the coming period 2011-2012. At the core of the work will be the communication of EU law to local authorities. Further, there is an agreement to limit the project to two or three challenges, namely:

- Identification of trade barriers in the region
- Exchange of best practice regarding the contact points for goods and services
- Networking on general Internal Market issues

For the future work, the Polish Ministry of Economy has agreed to lead module 1, and the Swedish National Board of Trade has agreed to lead module 2. The completion of module 3 and module 4 is dependent on a member state stepping forward to take the lead. For module 5 it was decided in December 2010 that each country first wanted to enhance domestic efforts for communicating the Internal Market tools.

Overall, three issues stick out from the experience so far:

The project has clearly raised the level of knowledge among the public officials participating in an area where the EU has reduced its coordination activities.

- Establishing effective cross-border working relationships takes time.
- The ambition for the project has to be aligned with the level of resources member countries are willing to commit. This process takes time.

3.2 An overall perspective on the progress of the EU Baltic Sea Region strategy process

The EU Baltic Sea Region strategy has to be evaluated within the context in which it was created four years ago. Two of the most critical decisions made already at the outset were to implement the strategy without new budget lines and with no institutional structures. Both of these decisions have in the meantime also been applied in the Danube Region. In addition, the strategy did not define any specific quantitative targets to operationalize the strategic objectives at the heart of the strategy.

Three questions can organize the discussion about the progress the EU Baltic Sea Region Strategy has led to:

- Has the strategy brought important new topics into focus?

The EU Baltic Sea Region strategy defines a broad scope, covering multiple dimensions of competitiveness and environmental quality. At this broad level, it is hard to see that important topics are missing, which should be discussed in this context. But within these areas, the answer is different. The specific actions and flagship projects reviewed represent only moderate changes relative to the past. This is not a surprise: The process to identify topics for the EU Baltic Sea Region was very much bottom-up, designed to elicit what is and what should be. While this could have led to a more intensive search for radically new ideas, such ideas are unlikely to emerge automatically from existing stakeholders. The Commission listened to these stakeholders from the Region, and then organized and synthesized what it heard. This was arguably the best approach to take, given that the Commission had neither the mandate nor the capacity to undertake an own, comprehensive assessment that could claim to be more informed than the view from the Region.

But this approach also has its limitations: institutions and networks deeply ingrained in regional collaboration are unlikely to tackle new areas, either because they are not traditionally in their focus or they have seen them to be without reach given the political reality. An example is market integration. The strategy continues to address border barriers. A more in-depth strategy for market integration based on a sector-specific analysis of regulatory barriers has not been tried. Such efforts were suggested in the past, for example in an assessment of national regulations in the financial services sectors done under the leadership of the Stockholm Chambers of Commerce. But they have so far not been taken up within the context of the strategy's action plan. Such new topics will only be addressed if there is clear political leadership that allows existing barriers within the political process to be overcome. And it will require new constituencies, in the field competitiveness particularly the private sector, to be much more involved.

- Has the strategy developed important new tools or solutions?

The EU Baltic Sea Region provides a new process, not a new tool kit or a new conceptual framework to address the Region's issues. Accordingly, the work within the context of the strategy has so far not developed significantly new solutions. Progress has been made, but it seems – and the three projects profiled in this Report are a good example for this approach – mostly along the trajectories defined in preceding projects and policy initiatives.

What could new tools or solutions look like? They would almost inevitably require new institutional structures to allow for different action or integrate different constituencies with new points of view. An example could, for example, be a common Europe 2020 Reform Program for the Baltic Sea Region as a complementary plan alongside the national reform programs presented so far. But this would require the policy work at the Baltic Sea Region to move from the specialist for regional integration to the generalists across many national ministries and government agencies. This has happened to some degree in some countries – the Swedish government's directive to all its agencies, which requires them to approach the Baltic Sea Region strategy as an integral part of their national objectives, is a prime example. But it has not happened systematically enough across the entire Region.

- Has the strategy led to a new approach towards implementation?

The EU Baltic Sea Region strategy was a reaction to the perceived lack of coordination across the many institutions and networks active across the Region. In this sense, the question of better implementation is really the key benchmark against which the strategy has to be evaluated. And on this dimension, the strategy has had significant impact on multiple levels:

1. The activities of cross-regional organizations and networks are increasingly based on the strategy as the key organizing framework. This has become clear over the last two years and is again visible in this year's review presented in this Report. There is significant collaboration on issues of common interest and a clear focus on those topics, which the strategy has highlighted. A good example is the TransBaltic project discussed in this Report, where the strategy has led to a better integration across existing efforts. Without a new

institution, the strategy has thus been able to function as a quasi-institutional umbrella for collaboration in the Region. Interestingly, the strategy seems also to have provided a good context for the collaboration with non-EU countries in the Region. For Russia, it provided an opportunity to engage with an EU-effort, rather than with an effort of individual EU members. And, through organizations such as the CBSS and structures like the EU Northern Dimension, there are well established channels for collaboration. And the Nordic Council of Ministers is contributing to involvement of Russia in concrete projects through its network of offices in the Baltic Sea Region.

2. The project financing from regional and external sources is increasingly aligned with the strategy. This is obvious in the way that IFIs operate in the Region – see the contributions from EIB and NIB in this Report. And it also has an important impact on the way InterReg funds are being allocated. Without a new budget line, the strategy has thus been able to function as a guide for how to spend existing financial resources in the Region.
3. There has been some mobilization of national resources for regional projects in addition to those already earmarked for Baltic Sea Region efforts. The flagship projects mobilize national resources and put them in the context of strong national interests. BSRStars, the project showcased in this Report, is a good example of the dynamics that have been created: The explicit strategic focus of Finnish innovation policy to increase the level of internationalization provides an important underlying driver to make this project much more than just another Baltic Sea Region collaboration effort. The explicit task given by the Swedish government to all public agencies, including in this case to VINNOVA, has provided the context in which they decided to allocate significant domestic funds to this regional effort.
4. Finally, the work on the strategy has strengthened policy-coordination across the Region. As leading representatives of ministries and agencies discuss the progress of the strategy, there is an increasing chance that there will be an – often informal – alignment of national efforts with a view on the policy priorities set by other countries in the Region.

Overall, the EU Baltic Sea Region strategy has been successful at the core, i.e. the better coordination of regional efforts, but has had much less impact beyond this core, i.e. opening up new areas of collaboration. There are a number of reasons that can explain this outcome:

The focus of political leaders in the Region has moved on. When the EU Baltic Sea Region strategy was announced, it was one of the explicit priorities of the Swedish EU Presidency and of many other governments across the Region. Since then, the focus of political attention has moved on to other topics. Partly this is the result of new pressing issues, especially those related to the economic crisis. And partly it is the result of the strategy being perceived as the natural end point, not the start of the process.

As the responsibility for the EU Baltic Sea Region strategy has shifted from political leaders to public officials, the focus has naturally turned from designing a new process to implementing activities within the given framework. With the original strategy giving no clear mandate to challenge existing approaches, develop new tools, and address new issues, implementation was naturally focused on doing the same as before, but better. Bold new steps, such as a common Baltic Sea Region reform program in the context of the Europe 2020 Strategy, would require a re-engagement of political leaders. The clear interest of the Polish EU Presidency in the Baltic Sea Region could provide such an opportunity.

Private sector engagement remains limited. The connections across the Baltic Sea Region span all dimensions of society, government, and the economy. But the collaboration on competitiveness upgrading is traditionally a domain where public administrations and agencies dominate. This remains the case even within the new context of the EU Baltic Sea Region strategy and the projects on its action agenda. With the type of projects structurally similar to those used previously, the profile of participants has largely remained the same.

The lack of private sector engagement in competitiveness-related projects limits the pressure for challenging existing approaches. It limits

the actual impact that projects have, as they do not result in company investments or other changes in company behavior. And it reduces the scope of what can be done as, for example, a different approach to market integration would require the knowledge and much more active participation of companies. Private sector leaders are unlikely to engage significantly through the existing institutions. But there is a chance to mobilize them in new structures, if they provide an opportunity for real impact. A public-private Baltic Sea Region competitiveness council, an idea launched already some years back, could play such a role.

No new institutional structures, no new budget lines. The EU Baltic Sea Region strategy was as an effort for a sub-group of EU members a significant innovation and step away from the traditional mantra to avoid 'multiple speed' integration. The political process for this experiment was the commitment to build neither new institutions (that would exclude other EU members) nor demand new budget lines (that would channel funds away from existing uses). The Region was happy to make this commitment, because there was a sense that the main problem was the lack of coordination, not the lack of organizations or money.

In practice, these limitations reduce the impact that the EU Baltic Sea Region strategy can have. Coordination does take place, but is sensitive to shifts in political attention and leadership. A more robust architecture, such as a public-private Baltic Sea Region competitiveness council mentioned above, would be feasible without creating a new bureaucracy. Funding has been made available, but remains largely limited to one-off national decisions or funds earmarked for regional collaboration. There are few joint funds that mobilize resources from a truly regional perspective – interesting examples are the Top Research Initiative by the Nordic Council of Ministers and the Nordic Investment Fund currently under discussion at EIF. Existing structural funds are national in nature and not easy to mobilize for regional efforts. A more flexible structure with regional pooling of resources would be feasible without the need for additional money. Politically such steps should be possible, given that the EU has de-facto become a structure with many different groups of countries integrating at their own speed, be it the Schengen countries, the EURO-zone, or other groupings.

No clear operationalization of targets. The lack of quantifiable targets has already been identified by the European Commission in its own mid-term assessment of the EU Baltic Sea Region strategy as an issue that needs to be addressed. While such targets can create a higher level of visible commitment than broad declarations of ambition, there is no sign that there is fundamental resistance to such targets in the Baltic Sea Region. The EU has adopted a large number of such targets, for example, in the context of the Europe 2020 Strategy. The European Commission has become increasingly assertive in communicating member states' failure to meet targets. In the Baltic Sea Region, the discussion of targets could be used to challenge the current focus on better coordination among existing partners on existing issues.

Clear targets could also help to force action on a clear limitation of many projects currently under way under the umbrella of the EU Baltic Sea Region strategy: the projects are – and both BSR Stars and TransBaltic largely fall into this category – about planning, prototyping of new tools and policies, and joint learning. The real impact, however, only materializes when policy programs or investments implement these plans, new policies, or learnings. And this depends on financing and policy decisions that are largely outside of the realm of the strategy. It requires action by national governments.

The European Union has announced an interest in using the macroregional approach developed in the Baltic Sea Region more generally as part of its integration tool kit. Is the EU Baltic Sea Region strategy likely to become a role model for the rest of the EU? The evidence so far suggests a qualified yes.

The strategy has proven effective to improve the level of coordination on issues related to competitiveness, especially in microeconomic areas such as infrastructure and innovation, and other policy areas such as the environment. It works where there are strong cross-border externalities or a similar set of national priorities. Such conditions exist in the Baltic Sea Region, but also elsewhere in Europe.

The strategy has proven effective in coordinating the efforts of many existing cross-regional organizations and networks. The Baltic Sea Region is quite unique in the breadth and depth of such linkages. Whether a similar strategy could be effective in other regions where there is much less of an existing institutional structure to build, is unclear. At the minimum, there would need to be a much stronger focus on creating regional linkages.

Overall, the EU Baltic Sea Region strategy provides an interesting new instrument for the EU that can improve the use of EU funds and enhance the integration among EU member countries. But they specific implementation within the Baltic Sea Region owes much to the particular circumstances in the Region, and is unlikely to work in the same way elsewhere. A more successful approach will be to develop a range of different macroregional methods, designed to meet the particular situation in other parts of the EU.

4. Implications

The review of collaboration across the Baltic Sea Region again shows a rich set of linkages and activities. Over the years, the level of coordination across these efforts has visibly increased, a trend that has continued over the last twelve months. The EU Baltic Sea Region strategy has played an important role in providing orientation and a structure within which individual projects could be anchored in a broader context.

International financial institutions actively support the efforts across the Region. For them, too, the EU Baltic Sea Region strategy has been an important reference point. It allowed them to prioritize and focus on efforts that address key issues in the Region as well as be part of a broader action agenda of complementary initiatives.

The most visible positive impact of the EU Baltic Sea Region strategy has been its coordinating effect on activities and especially in the relatively narrow field of InterReg funds, but also in the efforts of international financial institutions, financing priorities. The activities launched under the umbrella of the strategy even proved to be open for effective collaboration with non-EU members in the Region. In many ways, what has been achieved in this dimension is better than what was expected a few years ago.

While the strategy encouraged better collaboration among existing partners on established policy issues, it was not very effective in providing new solutions or engaging new groups. And while it is too early to tell, it is not clear whether the plans developed within the context of the strategy and its flagship projects will lead to the necessary investments and policy changes critical to achieve real impact.

These limitations of the strategy are largely the result of the structural decisions made at the outset. The lack of an institutional structure made the level of ambition in implementing the strategy's action agenda highly dependent on the support from political leaders. With their attention now captured by the global crisis and its aftermath, there is not enough political pressure to push the boundaries of regional collaboration. Within governments, this limits the impact the strategy can have on policy areas and agencies beyond the traditional core of regional actors. Outside of governments, it provides little impetus to mobilized private sector participants to engage.

Collaboration across the Baltic Sea Region is already an asset for regional competitiveness. And the EU Baltic Sea Region has had an important impact on increasing the effectiveness of collaboration. But the next level of impact will only be reached if some of the current decisions on the collaboration approach are reviewed:

- Strengthening the institutional architecture for collaboration, for example through a public-private Baltic Sea Region competitiveness council, is possible without creating a new bureaucracy. It would create the ability to define more ambitious objectives for the collaboration without the need for constant high-level political focus on the Baltic Sea Region.

- Increasing the flexibility of financial instruments, for example by further opening up national structural funds for cross-border regional use and by pooling more resources in cross-border regional funds, is possible without the need to mobilize new money or the creation of a new macroregional budget line in the EU budget. It would change the nature of collaboration and provide more stability for regional efforts.

Collaboration in the Baltic Sea Region is ultimately collaboration among sovereign nation states and subnational regions, even when it happens under the umbrella of the EU strategy. Progress is thus dependent on the willingness of national governments to enhance collaboration. They can do so through strengthening the institutional architecture and the flexibility of financial instruments as discussed above. They can launch new initiatives like the creation of an annual Baltic Sea Region reform program in the context of the Europe 2020 Strategy. And they can – as the Swedish government has done – actively push their ministries and agencies to pursue regional efforts as part of national policies. While the Baltic Sea Region strategy is an EU effort by name, its future and success lies in the Region, not in Brussels.

This section of the State of the Region Report describes the state of entrepreneurship across the Baltic Sea Region (BSR) , focusing on its role in explaining the relative performance of the modest catch-up of less advanced parts of the Region over the last two decades. Catch up through entrepreneurship is defined to include new business establishment and FDI contributions. New business formation takes a long time to show visible impact at the macro economic level. The statistically measured catch up has therefore been mainly driven by FDI, most of which coming from neighboring Baltic economies FDI levels and have been varying across the BSR according to the attractiveness of depending on the local entrepreneurial environment, indicating that there has been a role for policy.

Section C: Entrepreneurship in the Baltic Sea Region[1]

By Pontus Braunerhjelm and Gunnar Eliasson

1. Restoring a Baltic History of Viable Commerce, Entrepreneurship and Trade – The regional heritage points to the current political solution

For some two thousand years trade across the Baltic has brought the countries and regions on its rim together. After WWII some of the economies on the Baltic Sea Regiom (BSR) were, however forced under Soviet rule, economically isolated from the rest of the Baltic countries and impoverished, to be liberated around 1990 when the Soviet empire collapsed, leaving a dual BSR economy of industrially advanced and industrially backward countries.

Distressing as that might be, the current heterogeneous production structures of the entire Baltic economy also offers great opportunities for exploiting those differences through an entrepreneurial reallocation of resources across the entire BSR. We therefore make the role of entrepreneurs in both generating growth of the entire BSR economy, and in closing the still significant gaps in per capita incomes between the rich industrialized, and the poor and formerly planned Soviet economies the main theme of our analysis. The twenty year period that has now passed between the collapse of the Soviet Union and now should also be sufficient to exhibit, if there are any, differences in entrepreneurial capacities between the different economies, or regions of the larger Baltic economy, if not in the form of hard statistical data, at least through softer verbal evidence.

The different parts of the dual Baltic economy offer both great opportunities for industrial catch up through entrepreneurship, and a political concern of the social consequences of the adjustment. We also consider the possibilities of an entrepreneurial and commercial restoration of the entire Baltic Sea as a vehicle to unify the entire region through trade.

The Baltic Sea Region economies have about 60 million inhabitants and cover an area roughly the size of 3.3 million square kms. If the Baltic Sea is regarded as an inland sea of the Baltic States, which we will do for industrial and economic reasons, the geographical area of the BSR becomes enormous. The Baltic economy as we define it includes, on the one hand, the formerly planned economies of Estonia, Lithuania, Latvia and northern Poland, the coastal region of St Petersburg and the enclave of Kaliningrad (formerly Königsberg) with together some 30 million inhabitants, and with very low per capita incomes.

1 This is a considerably shortened version of a larger document with the same title, dated October 2011, that can be accessed on www.entreprenorskapsforum.se/publications

On the other side we find the wealthy industrial economies of Finland, Northern Germany, Denmark, Iceland, Norway and Sweden, together having a population of some 30 million, and significantly higher per capita incomes.

The institutional dimension and the geographical delimitations of our entrepreneurial analysis are therefore best understood against a brief historic background. Historically the regions on the Baltic Sea Rim have been part of an integrated and flourishing production and trading community across the entire Baltic Sea. It began already during the age of the Vikings, and possibly before, stretched through the 11 th century, and continued during the commercial reign of the Hanseatic League, through the 16th century.

From Viking invasions to Soviet suppression

The Vikings had criss crossed the Baltic in their innovative warships that could sail on both deep oceans and shallow waters and be lugged over land, with goods to sell and with ambitions to profit through commercial bargain, or violence. The early stories of the Vikings were told by the monasteries being looted along the coasts, notably the Irish coast, and since literacy and control of the media of the time was not the strength of the Vikings, their reputation as told by the clergy has been somewhat tarnished. Their eyes were certainly set on the opportunities to loot, but the vikings were as well early industrialists, entrepreneurs and traders who had to carry weapons to protect their goods. Wax & Wax (1955) even go so far as to say that the cradle of capitalist thought and action is to be found in the Scandinavian Viking culture and commercial ambitions that took the Swedish Vikings far into Russia. We play with the idea of an entrepreneurial spirit that may be part of the cultural heritage of the Baltic region.

The innovative cog that could carry large bulk cargo over large waters, however, changed the trade configurations of the entire Baltic Sea. The cog not only created an entirely new trading situation that put the agile Viking ships, designed for warfare, out of business. Lacking the stability of a strong civilian rule system, warfare at the time was as prevalent as trade, and large shipping capacity made it possible to rapidly deploy troops over the entire Baltic rim.

At the time the Hanseatic system of civil law, Lübsk Jurisprudence, introduced an era of political and commercial order and large scale business organization. It was established on the basis of the military hegemony of the Hanseatic League, and diminished the need, during the Viking age, of carrying weapons to protect the wares being traded.

Lübeck at the time (from the 13th century and on) was the second largest city of Germany

Figure 1A. Main Trading Routes of the Hanseatic League ca 1400

Source: Wikipedia

(after Cologne) and the headquarter of the League that linked a number of Hanseatic cities together by direct sea lanes. Among them were Rostock, Stralsund, Danzig, Königsberg (now Kaliningrad), and Riga, Reval, Narva, Visby, Stockholm and a number of affiliated office cities. Offices in both London and Bergen (in Norway) were gradually linked up. Owing to its position in the geographical centre of the Baltic transport system as a large stock-keeping depot and market place, Visby on the Island of Gotland became the trading hub that linked Russia through the Finnish Straights and Riga on the Düna estuary with Lübeck, and later Danzig. Throughout the 14th century these were the three most important commercial hubs of the region. In the 15th century the Baltic link up looked very much as on the map in figure 1A.

During this period bulk transport over land followed the rivers, and sometimes canals. Thus the southern and eastern inlands of Germany/ Holland and Russia were integrated through their large rivers and transports across the Baltic, and, as well, the seafaring nations England and Norway. As can be seen from the map in figure 1A both Cologne (Köln) and Novgorod were linked up with Baltic trade through rivers.

Before that and around the midst of the 14th century Visby was one of the most modern, compactly built and wealthy cities of northern Europe. Since the beginning of the immediate post Viking time, however, the Danes had ruled the Baltic Sea through a large navy and a larger geographical land mass that included control of the Öresund Straights. The Danish king Waldemar Atterdag, for instance looted this wealthy city in the middle of the Baltic in 1361, despite its membership of a now weakened Hanseatic League and both a promise of protection, and a warning of an imminent invasion from the Swedish king Magnus on the mainland (Westholm 2007).

This situation pleased neither the Swedes nor the Hanseatic League.

While the Danes could easily and fast move their troops across the Baltic the Swedes had to march their troops across land and therefore always arrived too late.

Lacking the industrial capacity to build war ships at home to counter the Danes the Swedish king Gustavus Wasa therefore acquired a navy of used ships off- the - shelf from Lübeck, and the Hanseatic League also provided financing, since it was in their interest to keep the Danes from growing too strong.

As the warring capacities of the Swedes steadily increased the entire Baltic developed into a local Scandinavian sea surrounded by, and joining Sweden, Finland, the Baltic "countries" and the Swedish North German possessions through trade.

The Baltic dominance of the Hanseatic League had effectively ended with the beginning of the Thirty Years War in the early 17th century. Swedish hegemony on the other hand peaked after the Thirty Years War and the later conquest of, and permanent integration with Sweden of Skåne , Halland and Blekinge by the Swedish king Charles X Gustaf . The Danes now lost control of the Öresund Straighs which pleased both the British and the Dutch. At that time the size of the Swedish empire was the largest ever, and now roughly covered the geographical area of our analysis. Large scale political order had been temporarily established as the military strength of Sweden grew. With time, however, military dictatorship, royal adventure and central political control of the lucrative toll cities of the estuaries of the large rivers emptying into the Baltic Sea took priority over economically beneficial commercial activities, and with Charles XII and the collapse of the Swedish empire political order in the Baltic region disintegrated altogether.

The final collapse of the Baltic region as an integrated trading area came with the Soviet Union, the repressive policies of which after WWII effectively closed off the Baltic States and Poland from the rest of the world. A dual Baltic economy was created, one part consisting of the now wealthy and industrialized Scandinavian economies being more or less isolated from the other, increasingly poor part of Soviet occupied territories.

For hundreds of years the sea lanes of the Baltic Sea had integrated the various economic regions on its rim and the river transports from far into continental Europe. This cultural and a commercial community was now broken up by Soviet isolationism and repression and the emergence of new modes of transportation that made sea transport less competitive during the 20th century.

The unexpected collapse of the Soviet Union around 1990, however, dramatically changed

the industrial and economic situation again and created a new economic potential, for one thing through reintegrating economies by trading across the Baltic, but also through opening up a vista of new opportunities based on unexplored resource reallocations made inactive for decades.

A new era in the Baltic region

This brief historical back ground frames the micro to macro entrepreneurial analysis to follow. First, it is there to tell that upon liberation even though the formerly planned economies around the Baltic had been depressed to per capita income levels not much above those in the poor underdeveloped world, they carried with them a heritage of institutions, social organization and economic development on par with that of their neighboring western economies from the pre Soviet era. This cultural, commercial and institutional heritage, if reactivated should serve as a platform for addressing our second concern, namely the potential for fast recovery and catch up with the West through entrepreneurial self organization and profitable trade.

That same initial structure around the 1990s also and suddenly defined immense opportunities for growth enhancing economic integration. Once the necessary physical infrastructures had been erected and the political impediments had been removed, the " cultural", mental and legal heritage of the Soviet Union eliminated and , again, a commercially defined trading area had been established, those unexplored reallocations, provided the entrepreneurial environment had been restored, could be achieved through spontaneous entrepreneurial action at the micro level and commercial interaction across the economic regions of the Baltic. The remaining barriers to trade and prosperity of the Baltic economy at large are therefore defined by the polices of the various, now autonomous national economies and the regional economic opportunities that have opened up.

While the Baltic defined, and, as we shall see, still defines the economic and industrial rationale for analyzing the Baltic region as a potentially economically integrated whole, this historic review has introduced three circumstances of importance; the common cultural background, the devastating consequences for a large part of the region of the Soviet post WWII occupation and the industrial and economic potential created by the liberalization that could be exploited by spontaneous entrepreneurship.

2. Entrepreneurship and small business in the Baltic Sea Region - Description

We have already emphasized the role of entrepreneurship and small business growth in transforming economies and promoting economic development (Braunerhjelm 2008). There are huge differences as regards the institutional set-up, norms and traditions among the economies in the Baltic Sea Region (BSR) that are likely to influence the extent and success of entrepreneurship and small and medium-sized enterprises (SMEs). The eastern European economies are still burdened by their communist non-market past of more than 60 years. Some of them have adopted radically new and market friendly institutions while others still suffer from inept institutions, unreliable property rights and unpredictable applications of the law. The non transition Baltic economies all belong to the mixed economy welfare type states with open markets, but also large public sectors financed through heavy taxes and reined in through sometimes far reaching regulation . The latter is particularly the case with the labor markets. Hence, the obstructions to entrepreneurship as a driving force in economic dynamism and transformation are still set up across the entire BSR, albeit more or less depending on country.

In this section we present data on the entry of new firms, the gender distribution and the size distribution of firms. We will also show the entrepreneurs by level of education, briefly touch upon their involvement in innovation and whether access to finance have impeded their emergence and performance. We are however restricted by data availability, which differ between years and countries.

We expect to find significant differences between the formerly planned, and the other Baltic economies.

2.1 Entry and exit

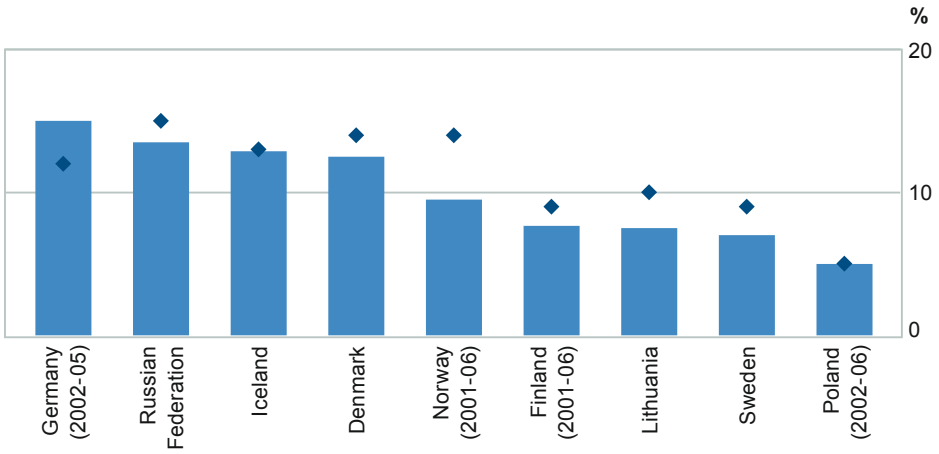
In figure 2 the entry of new firms for nine BSR countries is shown based on averages for the years 2000-2007. Unfortunately data is not available for all countries. Note that this is pre- 2008/09 crisis data. Germany, together with Russia, Iceland and Denmark are basically on par, the remaining countries lag somewhat , Poland being the real laggard. To observe is that the Nordic welfare economies Denmark, Norway and Sweden do not excel on the business turnover side, which for Sweden fits well into the picture of an industry dominated by very large companies and a correspondingly stale entrepreneurial and small business environment (Braunerhjelm et al 2010). On the other hand, the new entrants in the Nordic countries are far more sophisticated industrially than those in the transition economies, i.e. of the

kind the transition economies need for fast catch up, but cannot support in their own environment.

For individual years we have data for some other countries, and also for exits (Figure 3).

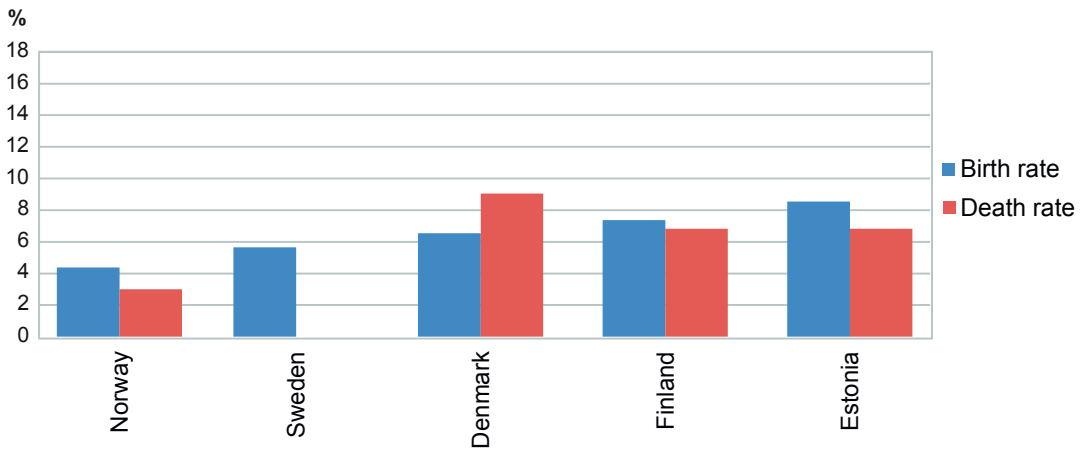
Entry in Estonia is similar to the level reported for Lithuania in Figure 2. The turbulence rate (entry plus exit) seems to be highest in Denmark and Estonia.

Figure 2. Number of newly registered companies as percentage of stock, averages for 2000-2007



Source: OECD 2010
Note: Diamond stands for 2007 figures

Figure 3. Turbulence rates in some BSR countries, 2006/2005. Registered companies, at least one employee.

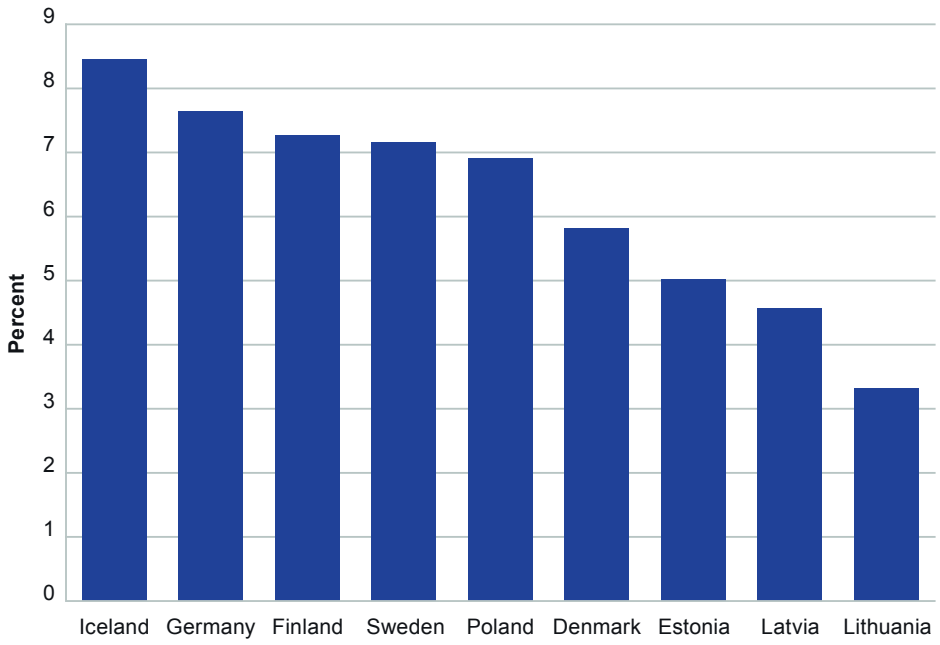


Source: OECD 2010

2.2 Self employment and entrepreneurship

Self-employment is a weak measure of entrepreneurship that may still say something about the size distribution of production and societal value of running private businesses. Figure 4 shows that self-employment differs with about one percent (in relation to employment) between Iceland, Germany, Finland, Sweden and Poland. Then there is a more pronounced difference to Denmark, followed by Estonia, Latvia and Lithuania. What do these figures tell? In order to say something more we need information on why individuals take up self-employment. Is it for necessity reasons, i.e. lack of other job possibilities, or is it because individuals have recognized opportunities that they expect to establish a business on ? These problems relate directly to badly functionin local labor markets, forcing unemployed to be self employed. Concerns have therefore been raised that increased self employment does not promote long term growth of the kind expected from innovative new entrepreneurship and new firm formation. The promotion of self employment was in fact first part of a proposed labor market reform under the National Reform Program (NRP) in Latvia. More recently policy makers in Latvia have worried that " necessity based " entrepreneurship may not be that good for long term growth since they will fail rather than develop into viable growth businesses, an interesting argument that we will return to below (See page ?? and the analysis of figures 16A and B).

Figure 4. Self-employment in relation to total employment, 2010

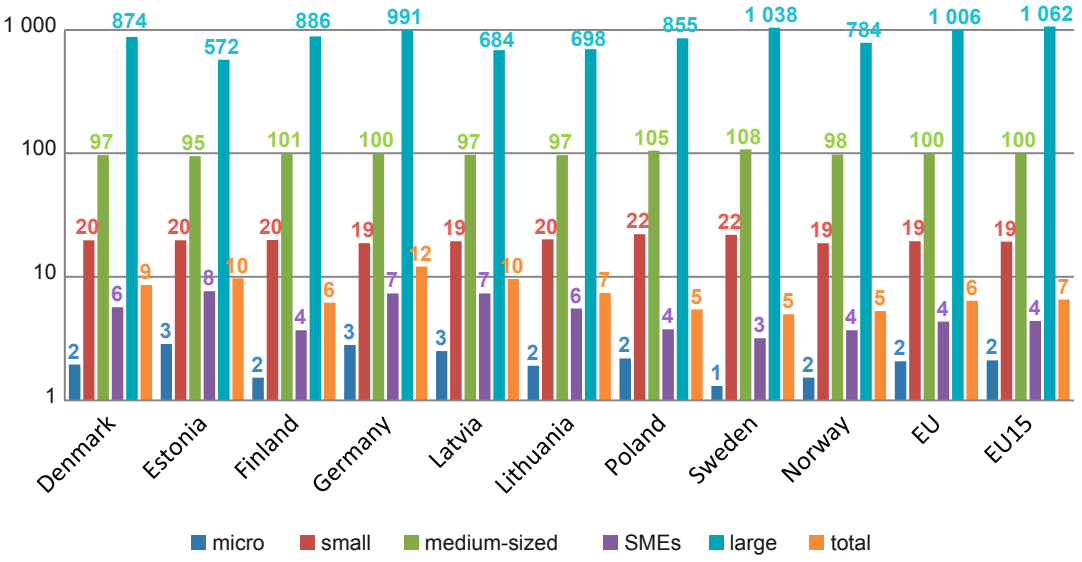


Note: Agriculture sector is excluded, the observation for Estonia refer to 2008.
Source: EU 2011

2.3 Firm size and entrepreneurship

Figure 5 is interesting. First, differences between countries are not large. Estonia, Latvia and Lithuania employ on average more labour in the SME categories than the other countries, but Germany and Denmark are close. Poland, on the other hand, exhibits size distributions similar to those in Finland, Norway and Sweden, even though Sweden have the largest firms in terms of average number of employees of all the BSR countries (Braunerhjelm et al 1998, 2011) i.e. offering a not particularly facilitating entrepreneurial climate (See discussion on p. 124). It is interesting to note that Poland, Sweden, Finland and Norway, in that order, come in on the low side in new firm formation in Figure 2, and Germany at the opposite end.[2]

Figure 5. Average number of persons employed per enterprise size category, 2008



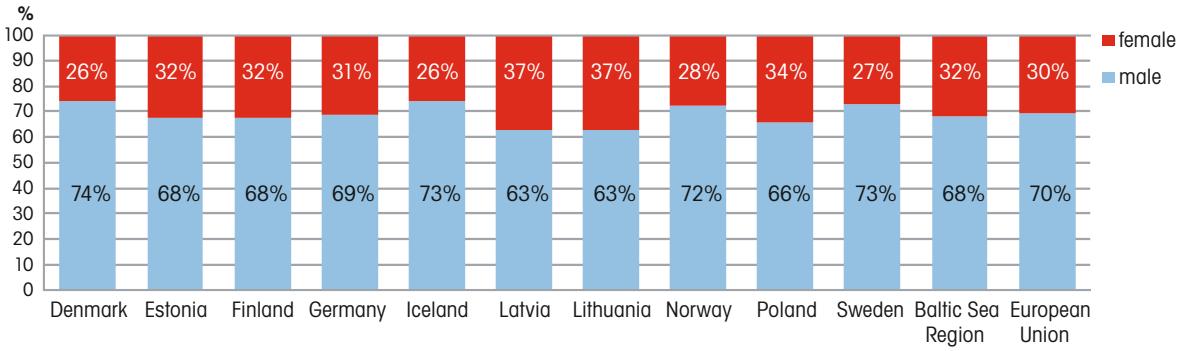
Note: Non-financial business sector
Source: EU 2011

2 Enterprises qualify as micro, small and medium-sized enterprises (SMEs) if they fulfil the criteria laid down in Recommendation 2003/361/EC which are summarized in the table below.

Category	Headcount	Turnover	or	Balance sheet total
Medium-sized	<250	≤ EUR 50 million		< EUR 43 million
Small	<50	≤ EUR 10 million		< EUR 10 million
Micro	<10	≤ EUR 2 million		< EUR 2 million

In addition to the staff headcount ceiling, an enterprise qualifies as an SME if it meets either the turnover ceiling or the balance sheet ceiling, but not necessarily both. If an enterprise does not fulfil the criteria for an SME, it is a large-scale enterprise (LSE). For statistical purposes, enterprises are classified using the headcount criterion only.
The staff headcount is a crucial initial criterion for determining in which category an SME falls. It covers full-time, part-time and seasonal staff and includes the following: employees, persons working for the enterprise being subordinated to it and considered to be employees under national law, owner-managers, partners engaged in a regular activity in the enterprise and benefiting from financial advantages from the enterprise. Apprentices or students engaged in vocational training with apprenticeship or vocational training contracts are not included in the headcount. Nor do you include maternity or parental leave. The staff headcount is expressed in annual work units (AWU). Anyone who worked full-time within your enterprise, or on its behalf, during the entire reference year counts as one unit. You treat part-time staff, seasonal workers and those who did not work the full year as fractions of one unit.

Figure 6. Self-employed by gender



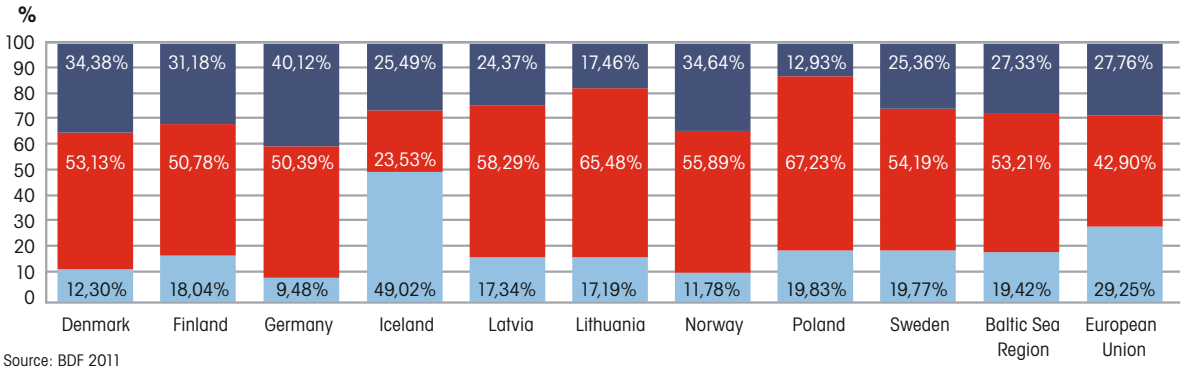
Source: BDF 2011

Women account for about one third of self-employment (Figure 6). Latvia and Lithuania have the highest shares, while Denmark and Sweden can be found at the opposite end. In a ten year perspective Latvia, Lithuania and Poland have seen a decline in female self employment, while Denmark and Germany have experienced increased shares of women self-employment and little change in the remaining countries (*Danish Enterprise and Construction Authority* 2011).

2.4 Entrepreneurship and human capital

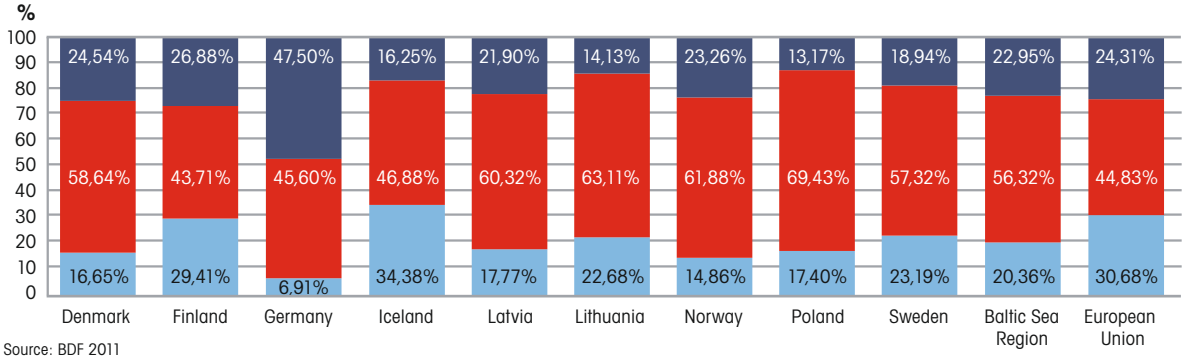
Eurostat collects data on the education of self-employed (Figur 7a and 7b). The top bracket refers to those with a tertiary education, the middle bracket shows upper secondary and post secondary, but non-tertiary education, while the lowest bracket cover individuals with the lowest education, i.e. pre-primary, primary and lower secondary.

Figure 7a. level of education among self-employed, 2005, males



Source: BDF 2011

Figure 7b. level of education among self-employed, 2005, males



Source: BDF 2011

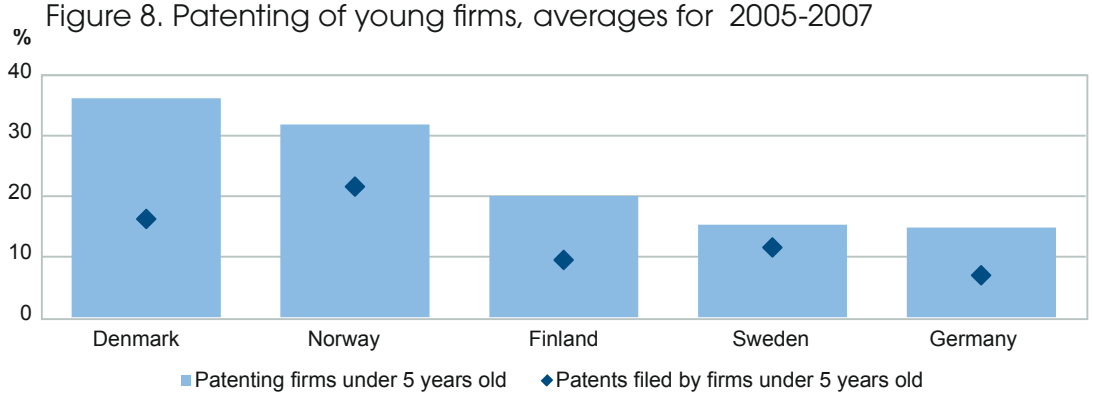
Germany sticks out as having considerably more self-employed with the highest educational level for both men and women (See also figure 4). Poland has fewer self-employed with higher education compared to all the other nations, but is well represented in the middle education category. Somewhat surprisingly, Finland and Iceland have the highest share in the least educated category among male entrepreneurs, considerably more than Latvia and Lithuania.

Innovation is an elusive phenomenon which is hard both to define and to measure. Patents are the most commonly used measure of innovation. Data is however scarce and is only available for the Nordic countries and Germany. The share of patenting firms younger than five years, and the share of PCT patenting filings are shown in Figure 8. Young firms in Denmark and Norway are more involved in innovative activities than in other countries, and these differences are particularly pronounced when compared to Sweden.

2.5 Subcontracting and partnership arrangements

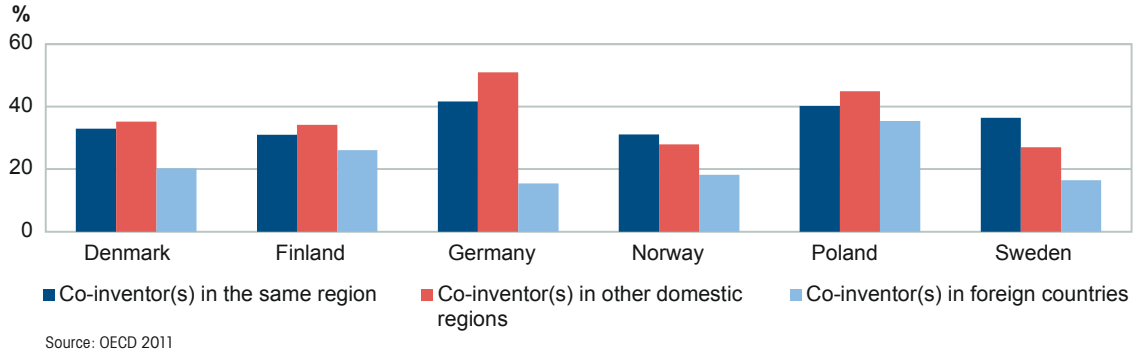
We will find the lack of deep and broadbased markets for subcontracting a particular disadvantage for the transition economies (see p. 136). One indicator of innovative activity that we refer to in this report is firms' involvement in joint development projects. Again, data is limited but now Poland has been added to the above group of countries. As shown in Figure 9 most joint innovative projects take place together with other domestic agents. The difference between the countries is rather small. It is notable, however, that Poland reports quite extensive joint innovation projects, not least abroad. One explanation could be that closeness to Germany favours that type innovative cooperation which may also explain the fact that Poland has managed quite well on the catch up side. This becomes even more of a realistic proposition when we find that some of these joint efforts capture a relationship between contractors

Figure 8. Patenting of young firms, averages for 2005-2007



Source: OECD 2010

Figure 9. Joint patents in relation to total patents, 2005-2007



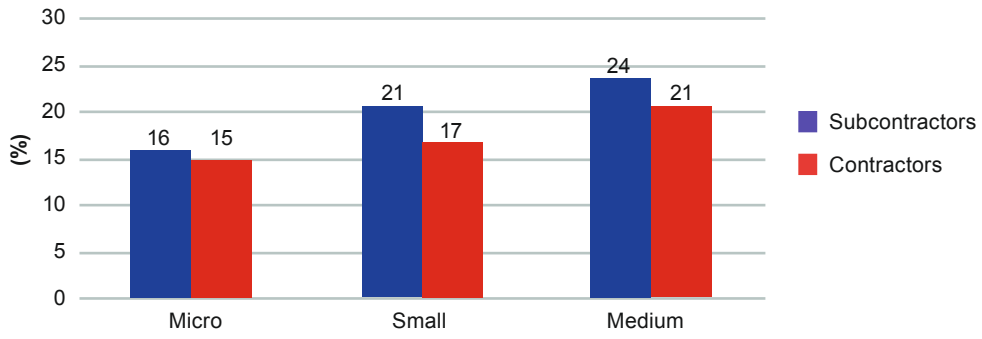
Source: OECD 2011

and sub-contractors, a circumstance that we will emphasize later as an important explanatory factor behind catch up.

The fact that firms have become increasingly intertwined in complex production networks as contractors and sub-contractors may also explain the pattern of inventive cooperation. A large share of firms act as subcontractors and contractors simultaneously, a dual role that not unexpectedly increase with size (Figure 10). Overall subcontracting is more common in the new member states, considerably larger than in the EU15 (Figure 11). The number of sub-contractors in new EU member states have also grown and is expected to continue to grow. So far growth has basically occurred domestically, or from a home country base. Overall, the degree of internationalization is low and outward FDI is close to zero.

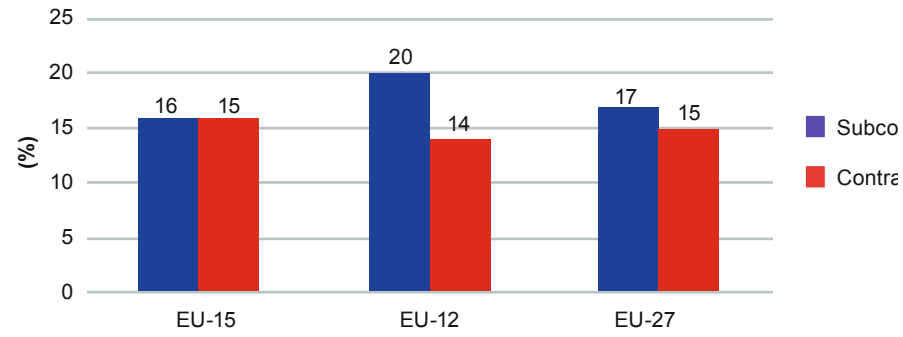
One of the challenges for future sub-contractors is how to develop an innovation capacity that enables transition economies to participate in the development of new products and processes (EIM 2009). One third of EU subcontractors claim that they have participated in product- and/or process-innovation and competence shortages are likely to be most apparent among new members. Germany is the largest contractor country in the EU and geographical proximity to Germany should therefore be advantageous for Poland in particular.

Figure 10. Percentage of SMEs engaged as subcontractors, 2009



Source: EIM 2009

Figure 11. Share of subcontractors among SMEs in EU's old and new member states, 2009



Source: EIM 2009

2.6 The funding of entrepreneurs and small businesses

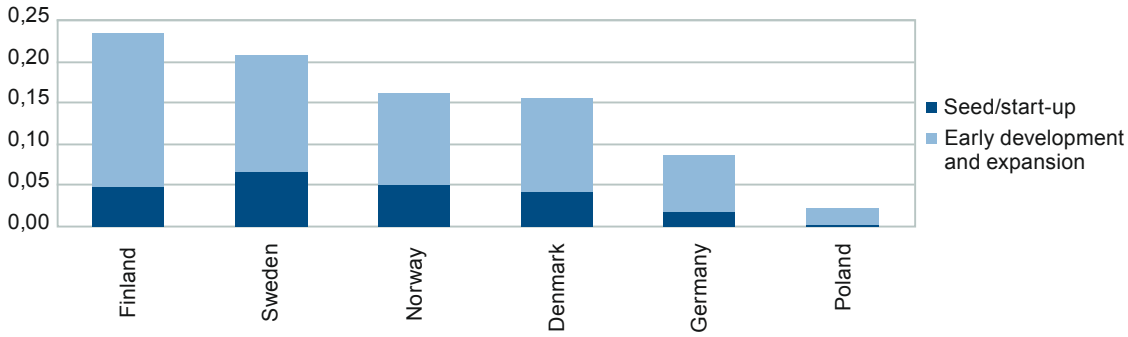
Finally we address the funding of new and young firms. Industrially competent finance, either in the forms of venture capital or earlier business angel capital, is a critical factor behind entrepreneurial activity in an experimentally organized economy.

For obvious reasons the statistics on venture finance refers to measured monetary flows that have been labelled venture financing according to the varying criteria used in the different countries. What we would have liked to have is the monetary flows that have come with the by far most important characteristic of venture capital, namely an associated industrial competence contribution that determines the accuracy of the funding agent in identifying the right innovations and entrepreneurs. Such statistics are almost impossible to compile, so measured venture capital flows are always more or less overestimated and especially in countries where government " venture capital" provisions are provided generously, and rarely with an associated competence contribution. (Eliasson 2005b, and discussion of Table 3).

We only have data on the supply side of venture capital for Poland of the Eastern European countries (Figure 12). Finland reports the largest supplies of venture finance, whereas Poland trails far behind the other countries. The emergence of a venture capital market is also associated with a country's industrial specialization. Both Finland and Sweden have a sizeable ICT-sector, which is known to attract venture capital, whereas Germany is more based in traditional manufacturing. While the former two countries seem to be well endowed with venture capital, Germany exhibits a relatively modest supply of venture capital. On the business angel side, Poland is doing somewhat better and has closed up with Norway and "passed" Denmark and Finland. Germany is doing much better in providing angel capital as compared to providing venture capital. Also Sweden is shown to have a relatively strong angel capital funding sector.

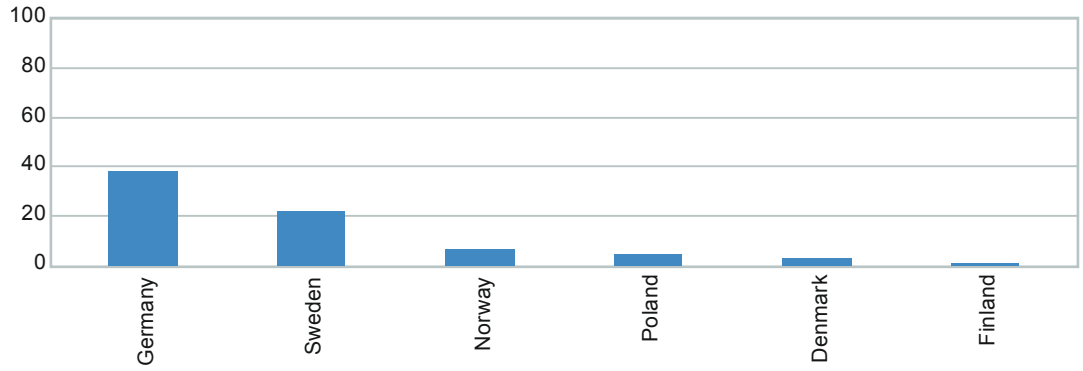
Hence, funding new and small businesses seems to follow different paths in the Baltic countries. Germany is weak on venture capital while it is strong in the earlier business angel market. The opposite is the case for Finland, and Poland is doing better with regard to business angel funding.

Figure 12. Venture capital investment in relation to GDP, 2008



Source: OECD 2010

Figure 13. Business angels, 2007



Source: OECD 2010

To summarize, there are no striking differences in start-ups among BSR countries. Self-employment, surprisingly, is lower in the formerly planned economies while firms on average are smaller and their employees have a lower education level. Data that allows a comparison on innovation is not available, and the same goes for funding of new and small firms. Hence, quality of data at the micro level only provides limited information and prevents more definitive conclusions to be drawn regarding the development and convergence of the BSR economies.

3. Identifying the Entrepreneurial Advantages and Deficiencies of the New Baltic Economy

As shown in Chapter 2 entrepreneurial activities differ significantly between the Baltic states. And entrepreneurial action of some sort is needed by definition for the formerly planned economies to come out of their Soviet lock- in, to move up their value chains and to catch up with their wealthy Baltic partners. Our focus of analysis therefore is on the role of entrepreneurial action in both the industrial catch up of the formerly planned economies to its wealthy neighbors, and in the growth of the entire Baltic economy. A first concern therefore has been to determine whether any significant catch up has in fact occurred during the last twenty years. This in no way can be taken for granted, since the wealthy economies might, given the right conditions, very well have been even more entrepreneurial, making the world even more economically diverse (Eliasson 2002, 2007). If so, the reasons must be looked for in the circumstances governing successful local entrepreneurship.

Entrepreneurship is however an elusive phenomenon. It is by definition unpredictable and therefore not plannable, and in principle beyond analytical understanding. Joseph Schumpeter (1911) used to talk about a "Deux ex machina", or the "God in the machine" that unexpectedly emerged on the stage of the Greek dramas and disturbed the action there. Apple´s sudden and unexpected introduction of the Iphone on the global scene in 2007, that severely disturbed the economic life of incumbent mobile terminal manufacturers, including the world´s largest player, Finnish Nokia, is an excellent current illustration. There was no, or little innovative new technology involved, only an innovative concoction of existing technologies and the idea of that concoction carried no statistically observable extra resource input. So if in principle predictable, there was only one player, the entrepreneur, who understood the economic potential of that particular winning combination, and dared to act. Now all incumbent and disturbed players are scrambling to their feet to imitate the features of the Iphone, dramatically reorganizing their businesses and changing the global mobile terminal market. The winners of the past may not be among the surviving winners.

Unpredictability in the Iphone sense therefore evades an ex ante definition of the entrepreneur, and forces us to rely on ex post observations of economic consequences as a practical definition. It is sufficiently difficult to identify these consequences, witness the difficulties of the traders in the stock market to discover, and properly value the existence of successful en-

trepreneurial activity until quite late and safe (Eliasson 1990, 2000b).

So the phenomenon of the entrepreneur was conveniently neglected by economists throughout most of the post war period, including new firm entry, until the crisis years of the 1970s forced an awareness on a reluctant economics profession, together with a renaissance of Joseph Schumpeter. But this took well into the 1980s.

We will nevertheless go for such a definition and attempt to identify the macro economic consequences of entrepreneurial action that seem not to be related to any measurable form of factor input , and have something to say on the environment where such entrepreneurs thrive and operate.

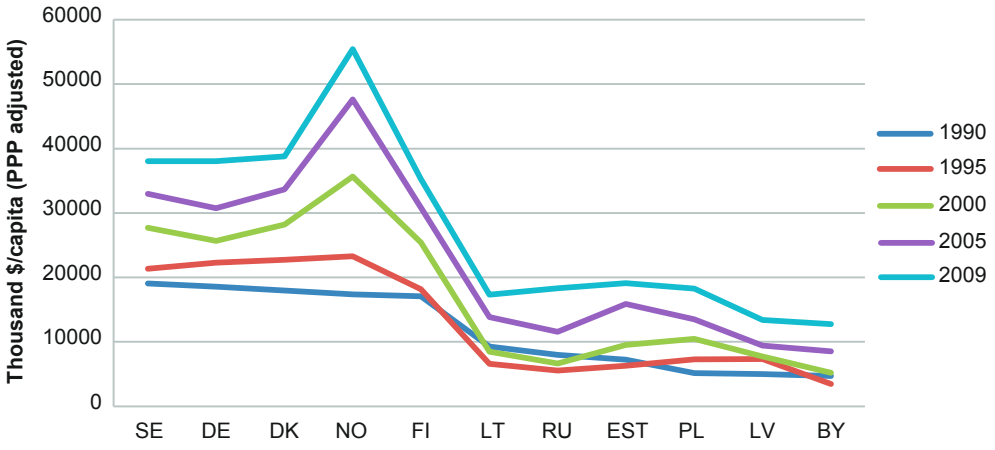
To derive such a definition is, however, not without its problems. The production process is full of intangible factor inputs that are not easily observed, but that may be, if sufficient effort is expended. Knowledge can be systematically accumulated through R&D, and R&D investment can be measured. R&D based innovation functions are now the basis for a whole branch of new growth theory models demonstrating very large effects from spillovers (Jones & Williams 1998, 1999), so the growth effects of such, in practice measureable, but not measured, factor inputs will have to be excluded. We are then left with the discovery of new technical solutions at no measured factor inputs in the accounts of the own business and the economic consequences of a bright and seemingly costless idea (spillovers and positive externalities, see Braunerhjelm et al 2009 or Eliasson 2000b, 2010).This will also define out method.

A successfully growing economy has to be fueled by sustainable innovation and entrepreneurship of some sort. And the magnitudes involved are large. This is made overwhelmingly clear in the more sophisticated versions of new growth theory as distinct from the results of the previous empirical productivity literature (Jones & Williams 1998, 1999, Acs et al 2005, Braunerhjelm 2008). For the formerly planned economies, where individual innovation and entrepreneurship were effectively suppressed in the interest of a politically orderly Soviet State , however, revival of local entrepreneurial activity unavoidably was a drawn out process requiring not only lacking economic competence capital, but also a change in attitudes, the macro economic consequences of which only becoming visible in the long run. So we should not expect to see much in the form of macro economic effects of entrepreneurship from what happened in the first ten years of the formerly planned economies on the Baltic Sea rim until beyond the year 2000.

We will then *first* try to see whether a catch up has in fact occurred within the Baltic economy, and then relate this catch up (or absence of it) to the presence of some form of entrepreneurial action.

The dual situation of the Baltic economy of the past and today is illustrated by the income per capita distributions of Figure 14 and the productivity distributions in Table 1. They exhibit the large differences between the formerly planned economies and the other economies on the Baltic Sea rim, that places five of the wealthiest economies in the world around 1990 very close to the poorest economies in the industrialized part of

Figure 14. Per capita income levels of the Baltic economies (PPP adjusted) 1990, 2000, 2005 and 2009



Note: The economies are ordered by decreasing per capita income in 1990 from left to right. The countries are in that order : Sweden (SE), Germany (DE), Denmark (DK), Norway (NO), Finland (FI), Lithuania (LT). Russia (RU), Estonia (EST), Poland (PL), Latvia (LV) and Belarus (BY).
Source: The World Bank

Table 1: Labor productivity in manufacturing 2004 in market prices

Finland	Sweden	Germany	Poland	Estonia	Lithuania	Latvia
46	40	39	10	10	6	5

Note: labor productivity is expressed in value added in Euros per hour worked.
Source: Nevalainen (2008)

the world, exhibiting gaps in economic well being that have diminished somewhat, but still remain large. When weighted by the size of the populations involved the poor part of the Baltic economy still remains huge. In fact, the catch up on average between the two parts between 1990 and 2009 appears surprisingly small.

There are, however, significant differences in catch up between the different transition economies.

Nevalainen (2008) has compared (labor) productivity development 1996-2004 in the Baltic transition economies and in other Baltic economies. The differences between the two blocs are large. The average for Estonia, Latvia and Lithuania on the one hand, barely reached 15 percent of that for Finland, Sweden and Germany. Poland came in at 25 percent of that level, and we have referred to closeness to Germany and early partnership arrangements with large German contractor firms as a possible explanation (See section 2.5). While some catch up had occurred in Estonia from 1996, and significant catch up in Lithuania, Latvia had lagged further behind.

As should be expected the per capita income gap (PPP adjusted) around 2005 (See Table 5) is not as large as the labor productivity differences in Table 1. While per capita incomes have caught up from around 15 percent in 1990 to almost 35 percent in 2005, the productivity gap in manufacturing remained at just above 15 percent in 2004 (No data available for 1990).

The *second* step will be to determine what form of entrepreneurial activity to look for. That will be dealt with in the next chapter.

Finally we look at the individual economies involved and compare growth rates and shares thereof explained by Total Factor Productivity (TFP) growth. TFP change, or the (technical)

residual factor of production picks up the influence on growth of unmeasured factor inputs. Ideally therefore TFP growth would be composed of the effects of:

1. Discovered and commercialized spillovers (Acs et al 2009)
2. True entrepreneurial activity (Eliasson 1996, 2000b, 2010).

Hence TFP change may be interpreted as an *indicator of realized entrepreneurship*[3]. Unfortunately, however, TFP measurement in practice, and especially in international comparisons like ours, is severely flawed by data inconsistencies, and polluted by the effects of measurable, but in practice not accounted for factor inputs such as R&D services and variations in labor force qualities, and of importance for our comparisons , capital gains in raw material extraction and basic industry production. We will return to these problems in chapters 5 and 6, and Eliasson & Braunerhjelm (2011) clarify these relationships mathematically.

The policy concern now is how the gaps at the macro level may be closed and at what rate, and what policies among the nations involved are workable in pushing up entrepreneurial inputs in production. Since viable entrepreneurship occurs at the micro levels where business decisions are taken we have to take the analysis down there.

The neoclassical macro models therefore have little, or nothing relevant to say here. They are however still the base for practically all econometric analysis that we have to rely on, so we have a principal problem of theoretical validity to resolve. That requires a brief theoretical introduction.

3 The mathematics behind this conclusion is explained in the accompanying larger parallel paper Eliasson & Braunerhjelm (2011), notably its technical supplement.

4. Some Theory, Some Stylized Facts and Hypothesis Formulation

The overriding concerns of any analysis of the Baltic Sea community as a whole are the large differences in economic welfare of a very large dual economy. The apparent persistence of the welfare gaps and the entrepreneurial action at different levels needed, both to close them and to exploit the opportunities for improvement embodied in the dual situation, defines a complex dynamic micro macro (aggregation) problem. While most of the empirical material available is solidly based on neoclassical macro models of measurement, the theory needed to understand and reinterprete the numbers, will take us into an Austrian/ Schumpeterian economic world, or what we prefer to call it, an *experimentally organized economy* (Eliasson 2009).

It must also be recalled that the industrial backwardness of the formerly planned economies at the time they were liberated was one hundred percent due to the political repression once created by the Soviet Union. So, by definition there is a policy task of some magnitude to undo that heritage.

4.1 A huge reallocation of resources across national boundaries needed

The policy situation can therefore be characterized as that of supporting an extraordinarily large reallocation of resources with huge potential economic gains across geographically large and politically segmented markets (1) to maximize growth of the entire Baltic economy, and (2) to ensure that the economic growth benefits are reasonably distributed over the various local economies. If the entrepreneurial environment is right and properly supported by policy the formerly planned economies in fact stand to gain more in terms of growth than the already wealthy economies. To begin with, and this is a property of an experimentally organized economy, no agency, or political authority will know how a fair distribution of growth could best be achieved. Hence, the optimal policy at the Baltic level at the time of liberation was in fact understood to leave this task as much as possible to the markets that "knew best", avoid to attach central policy directives, and instead make sure that the markets that reallocate resources were functioning effectively and with a minimum of institutional impediments . Above all most of the restructuring would have to be done through FDI from countries around the formerly planned economies (Eliasson et al. 1994). As Rybzcynski (1993) nicely put it, the critical problem was how financial markets, with or without government policy " help" would manage to distribute the property rigths during the transition from the old planned to the new market economies. It belongs to our story that the different transition economies on the Baltic Rim followed this market credo more or less faithfully, and accordingly were more or less successful in the catch up game. It was known for sure, however,

that the local realization of this truly experimental policy scenario would depend critically on local entrepreneurial abilities that differed significantly between the different on the Baltic Sea Rim.

Obviously this was not an appealing situation for local politicians now "democratically responsible" to local voters impatient for the dividends of a free market to become available, so much of the policy discussion along the way has vacillated between industrial policy directed allocations (" picking winners") on the one hand, and focusing on getting the market environment for change right, on the other.

One argument expressed in favor of central policy action was that the formerly planned economies were so far behind that catch up would be a matter of imitation only, and policies directed centrally would minimize business mistakes and be a way to economize on scarce resources. In a massive inquiry into how Estonian manufacturing could have been restructured on the horizon 2018, Etlatieto and Etla argue something of that sort [4]. We remain skeptical, and will advocate the policy priority of getting the local entrepreneurial market environments right.

4.2 Growth through Schumpeterian creative destruction - How to go from micro to macro across markets

In our micro to macro perspective catch up by the formerly planned economies would have to occur through a Schumpeterian Creative Destruction process of the kind stylized in Table 2. In this model growth occurs through experimental selection, enforced by entrepreneurial entry, the details of the outcome being unknown until observed, but for the formerly planned economies to begin with being dominated by "destructive" exits. To accept the latter to facilitate market induced positive change would not be a politically easy task, and the transition economies have differed in their political abilities to cope (se further below).

To understand how this industrial restructuring can be best achieved we go through four principally different elements of what we call an Experimentally Organized Economy of which the Schumpeterian creative destruction process of Table 2 of entrepreneurial firm entry, reorganization and rationalization of incumbent production organizations, and exit of failing businesses are central.

Table 2. The four mechanisms of Schumpeterian Creative Destruction and economic growth – going from micro to macro

1.	Innovative entry enforces (through competition)
2.	Reorganization and/or
3.	Rationalization, or
4.	Exit (shut down)

Source: Eliasson (1996).

That transformation process is driven by entrepreneurship which occurs at two principally different levels; through *new firm formation* (Item 1) and through the *innovative reorganization* of incumbent firms (Item 2), each form requiring dif-

4 *Industry Engines 2018,* published in 2008.

ferent entrepreneurial abilities and environments, many of which not being available in the formerly planned economies, and both forms imposing competitive pressure on other incumbent firms, forcing them to *rationalize* their ways (Item 3) and pushing some towards *exit* (Item 4). It was observed in the early studies of the formerly planned economies that not only were the legal systems inconsistent and arbitrarily implemented. Business technical know how was way out of date, western marketing knowledge and product quality control lacking and the honoring of delivery commitments an unknown obligation . Incumbent producers in the formerly planned economies had had practically no experience from working naturally in competition and cooperation with Western producers (Eliasson 1993a,1997,1998).

Finally, achieving the right balance between creation and destruction that defines the optimal reallocation of resources that maximizes growth in the entire Baltic economy requires significant trade over markets in intangible assets, which in turn depends on a functioning property rights system and developed financial markets, not at all existing initially in the formerly planned economies (Eliasson 1998, Eliasson & Wihlborg 2003). Table 2 therefore represents a stylized micro to macro growth model of a complete economic system.[5]

4.3 What determines the balance between creation and destruction?

The firms of the formerly planned economies were found to be lacking the technologies, the market knowledge and the labor skills needed to become competitive by western standards on their own (Eliasson 1993a, 1997, 1998[6]).

Lacking those entrepreneurial abilities the second best response to competitiveness was to lean towards the rationalization and exit doors, unless competence support could be obtained through FDI and mobility of competence from industrially more advanced neighbors. But since success always comes with difficulty and risk, also many firms in the industrially advanced Baltic countries have a record of profound business failure during our period of analysis, although to a lesser extent. And typical of those firms have been to respond to global competition by outsourcing the lower end of their value chains to low wage countries, an act of reorganization requiring new management competences and often resulting in failure (Eliasson 2005c). So lack of innovative management, a functioning financial system and marketing knowhow, and the use of socially inclined policies that slow the exit processes are not unique to the formerly planned economies.

The balance between creation and destruction in the restructuring of the economies on the Baltic Sea Rim was therefore an acute policy problem everywhere, and the worries of the transition economies were that they might get stuck with only destruction and escalating unemployment for years, and no creation.

The early discussion of the liberalization of the planned economies therefore focused on how the privatization of the outdated firms should be organized. On this Rybczynski (1993) observed that the entrepreneurship needed to get their competence capital up to date would bring " the relationship between the distribution of property rights and the financial system to the top of the political " agenda. Privatization as a vehicle to restructure firms´ economic performance, however, again was not unique to the old Soviet territories. The universal problem of state run companies is the economic inefficiencies that protection from competition breeds, and the acute need of change of the entire competence capital (read the staff) of the company.[7]

In many welfare economies the political idea was that the competence capital of entire businesses could be upgraded without lay offs. So was also the case in the Baltic transition economies, but in

5 In Table 1 and the following discussion the mechanisms of endogenous growth in the Swedish micro to macro model are presented verbally . In principle this means that if we could load the model with the data that we discuss and need, the macro economic growth consequences could be calculated conditional on the empirical micro macro structure of Swedish industry and calibrated coefficients governing the market dynamics of the endogenous growth processes (Eliasson 1977,1991a, Eliasson, Johansson & Taymaz 2004, 2005, Eliasson & Taymaz 2000).

6 These three studies were based on a series of visits to Hungarian, Estonian, Latvian, Lithuanian and Russian firms by Swedish business leaders and technical directors of their companies and a couple of economists (one of the authors included) in the years 1990 and 1994, organized first by the Swedish Academy of Engineering Sciences, and then again by the Federation of Swedish Industries and The Swedish Employers Organization.

7 In Mexico, writes Tornell (1993), "the number of state-owned companies increased from less than 400 in 1970 to 1155 in 1982". Many were bankrupt firms that the government had bailed out to prevent unemployment. Others had been started by government on the argument that private investors would not internalize the social benefits that might come with such projects, and therefore not invest in them. After the privatization process initiated in 1983 there are less than 250 state operated firms. Today (1993) some of the original state owned projects were never completed, others are in disuse, many have been shut down and what remains operates on government subsidies. See also Braunerhjelm & Fors (1994).

both places it was soon understood that this was not a viable policy proposition. Obviously the outcome would be partly determined by how well the local labor markets were capable of reallocating laid off labor on new jobs, and it is therefore of interest to look at the extent to which the policy makers in the transition economies would dare to take an immediate, but temporary increase in local unemployment to revamp their overstaffed and underperforming " soviet " companies.

4.4 Entrepreneurship through new firm formation

Entrepreneurship research falls into three categories (Eliasson 2005:37): The behavior of individual entrepreneurs and firms, the commercial and institutional environment in which they operate and the growth and welfare outcome. Entrepreneurship per se carries no general interest if not related to some "welfare" outcomes. That is the reason for making catch up the politically desired objective of our analysis. Entrepreneurship itself relates to the behavior of the individual entrepreneur or business. The technical, commercial and institutional environment supporting the entrepreneur is defined by the competence bloc of Table 3.

The key missing factors behind a forceful entrepreneurial entry engine in the Baltic economies will be found in the commercializing environment, notably when it comes to:

- The industrial competence of venture capitalists to identify and fund winners , and
- The existence of exit or private equity markets to facilitate the reorganization of incumbent firms.

First, and to follow Table 2, entrepreneurship through new firm formation is most closely associated with the term entrepreneurship. The tricky matter is that it takes much longer to identify observable positive consequences in the national statistics of new firm formation than from FDI and indigenous business reorganization and, as well, large firm failure (Jagren 1988, Andersson et al 2011). Meaningful statistics on new firm formation, furthermore, is much more difficult to come by. Finally, and critical, while FDI is relatively well defined and involves the passage of existing national statistical border observation posts, *entrepreneurship through new firm formation* is statistically almost invisible at early stages and *has to be broadly defined to involve also the integration of the knowhow and experience of the large part of the national commercial or financial system* (See Table 3).

Table 3. Actors in the Competence Bloc

1. Competent and active customers

Technology Supply

2. Innovators who integrate technologies in new ways

Commercializtion of Technology

3. Entrepreneurs who identify profitable innovations
4. Competent venture capitalists who recognize and finance the entrepreneurs
5. Exit or private equity markets that facilitate ownership change
6. Industrialists who take successful innovations to industrial scale production

Source: Eliasson-Eliasson (1996)

Full understanding of the role of new entry in economic growth in fact requires access to information that does not even exist in the advanced industrial economies. Again, in a policy assessment on entrepreneurship in Latvia promotion of self-employment and entrepreneurship was on the list of proposed labor market reform under the national Reform Program (NRP). It is observed there, correctly, that the current increase in early stage entrepreneurial activity will not contribute to much economic development over the foreseeable future. Most new start ups will probably fail, or be of the "necessity based type" that won't generate long term growth. The Latvian exit rate is high by comparison and the large increase in exits during the deep 2008/09 recession was estimated to depend to 70 percent on lack of access to finance and plunging profitability.

The Latvian policy argument is intriguing. First, policies to raise growth through innovation and entrepreneurship cannot of course be formulated independently of labor market policies. Structural change requires flexible labor markets and much more should be said on this than

we have done. Second, emerging sophisticated production technologies , rather than demanding standard non skilled labor inputs determined by the physical capital, place increasing demands on the workers themselves to define their own jobs, in short to be " more entrepreneurial" (Eliasson 2006a,b)[8]. This is becoming increasingly typical of the advanced industrial economies creating at places insurmountable educational and social security problems.

4.5 Internal entrepreneurship through FDI within large business organizations

Theoretically, the fastest way to upgrade competitive performance of entire industries is through wholesale reorganization of incumbent firms using their existing employment base. Theoretically that is. To develop the indigenous needed industrial competence base is a difficult and resource demanding undertaking that even if successful would take much longer than impatient populations would be willing to wait for the new economic prosperity to be delivered. Such upgrading of the competence base of a business by definition means upgrading the labor force, which is normally achieved through lay offs and new recruitment.

Upgrading the physical capital is easier, once the right management has been recruited. Learning the needed skills in the formerly planned economies, however, and whether through new recruitment or on the job learning, required access to foreign sources of experience, so it was agreed at the time of liberation that the fast way to prosperity was through learning from inward FDI on terms that both the foreign investor and the receiving party would profit from. The initially very low wages for unskilled, and to some extent skilled labor, would then be the early competitive advantage to get an autonomous market based process going. So FDI as an endogenous innovation and spillover source of incumbent producers over the twenty year period of analysis should be expected to relate to observed differences in national productivity performance. One would however expect that the first and technically most simple measure would be to shed redundant staff.

Exit of large businesses on the other hand, as compared to small and new businesses, is often slow and accompanied by significant waste of internal resources, or Government subsidies that could have been put to more profitable use elsewhere.

Finally, and not to be overlooked, therefore, the reorganization process needed in the Baltic economy at large would unavoidably involve the death of parts of, or entire production establishments in the formerly planned economies. T*he more successful this reorganization through the birth and the death of businesses the more demands would be placed on the capacities of the national labor markets to reallocate laid off labor to new jobs*. Slowing down the exit mechanisms , Eliasson et al (1994) concluded, would slow growth and prolong the time of catch up to Western standards.

Again, the Scandinavian welfare economies have been suffering from similar problems during the entire post WWII period, the most illustrative example being the socially costly and long winding convulsions associated with shutting down the failing Swedish shipyard industry, once the second largest in the world (Carlsson, Bergholm & Lindberg 1981, Carlsson 1983a,b)).

4.6 The importance of FDI: The case of Estonia

Productivity growth has increased in the host countries as the more productive foreign owned firms increase their share of production compared to domestic firms. Estonia has been the largest receiver of FDI compared to its GDP among the Baltic transition economies, even compared to Poland (Figure 15) despite Poland´s advantageous position residing close to Germany. This tallies with the earlier observation below that Poland has not been a particularly welcoming environment for FDIs.

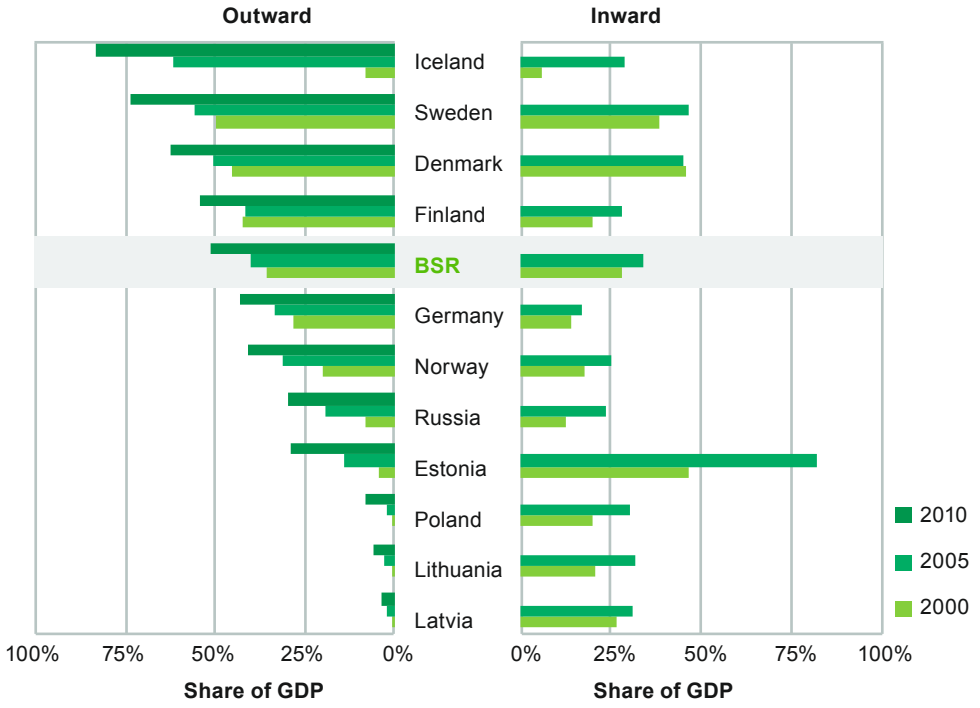
The largest firms in Finland and Sweden have located about nine and three percent (respectively) of their foreign production in the Baltic countries Estonia, Latvia and Lithuania. The share of these firms´ total foreign employment located in

8 Remember here that the modern manufacturing plant employs very few workers of the "old type" per value added $ generated. The new type of " workers" that may be characterized as above are found in product design, development and engineering departments, in marketing and in the rapidly growing external consulting and services industry that supports entire industries (Eliasson 1990, 1996, 2006a).

Figure 15. FDI investments

FDI Stock over Time

Baltic Sea Region Countries



Source: UNCTAD (2011), author's analysis.

State of the Region-Report 2011

the same Baltic countries amounts to 11 and six percent respectively.

Those figures may not look particularly impressive. Yet, from the point of view of the receiving countries, the economic importance of such inward FDI is considerable. For instance, looking at the 30 largest private sector companies for 2006, there are 15 companies with foreign ownership. In 12 of these the major owner is from Sweden or Finland, and in addition there is also one with a major owner from Denmark. Of the other two foreign-owned companies, there is one (Belize) which, according to Estonian media, is owned by local owners. In most cases foreign ownership is 100%. Altogether multinational corporations with Nordic ownership had 35 519 employees in Estonia 2006 (Table 4A), representing all different economic sectors.

When we look at the panel comprising the 30 largest manufacturing companies, as many as 20 are foreign owned. Of these, 13 are owned by Nordic MNCs and their total employment is 15 309 which is slightly above the employment of the locally-owned companies (Table 4B).

Table 4A: ESTONIA: The 30 largest private sector companies by major owner's country of registration. Number of firms and employment, 2006

Ownership	No of companies	Employment	Employment (%)
Local	15	41 322	52.1
Sweden	6	18 580	23.4
Finland	6	9 518	12.0
Denmark	1	7 421	9.4
Other	2	2 409	3.0
Total	30	79 250	100.0

Source: Braunerhjelm et al (2010).

Table 4B: ESTONIA: The 30 largest manufacturing companies by major owner's country of registration. Number of firms and employment, 2006

Ownership	No of companies	Employment	Employment (%)
Local	10	15 197	42.9
Finland	6	8 140	23.0
Sweden	4	5 071	14.3
Denmark	3	2 098	5.9
Switzerland	3	1 885	5.3
USA	2	1 199	3.4
Other	2	1 812	5.1
Total	30	35 402	100.0

Source: Braunerhjelm et al (2010)

Again, five of the largest Estonian companies are subsidiaries of one of the 30 largest manufacturing companies in a Nordic country. They employ 7 207 people in Estonia, making up 20% of total employment among the 30 largest Estonian companies.

Referring to the discussion in the previous section, the development of indigenous contractor firms serving as competent customers to a growing subcontractor industry are a critical element in the upgrading of the industries of the transition economies and in catch up.

On this Vahter (2011) concludes that FDI entry in the local Estonian industry 1995 through 2004 has not significantly affected incumbents´ measured productivity in the short run. More importantly in a long term growth perspective, however, is that FDIs have significantly influenced the product innovation process of incumbents and intensified the knowledge sourcing activities from other firms and within the incumbent firms themselves.

4.7 The entrepreneurial environment – Commercializing competences and institutions

New technology is neither created nor commercialized in a vacuum. Economic growth through experimental selection, as in the Schumpeterian creative destruction process of Table 2 requires a whole sequence of supporting competence inputs that govern the commercialization and selection processes within firms, or over markets (Eliasson 2009). The competence bloc in Table 3 lists the most important inputs of such commercializing agents that are needed to convert technology supplies (or innovation) into macro economic growth.

These agents define the commercializing environment of the innovations where entrepreneurs and financial agents operate. This dynamic can only be understood from the micro market level and up (aggregation) to macro. There, the venture capitalists and private equity market agents that we mentioned above are found, the latter operating in the markets for mergers and acquisitions (Eliasson & Eliasson 2005). These critical actors in the commercializing environment were entirely absent in the Baltic transition economies at the time of their liberalization, and still to a large extent are.

Allocations occur within hierarchies or over markets. The latter requires trade in intangible technology assets, and the support of efficient property rights legislation to make such trade possible, or the allocation process will come to a halt (Eliasson & Wihlborg 2003). In the competence bloc of Table 3 those transactions take place in the venture capital and private equity markets (Items 4 and 5). Here the differences between the two parts of the Baltic economy during the early phases of political and economic liberalization were huge. Since allocations over markets draw resources (transactions costs) competence bloc theory also provides a theory for determining the outer limits of the firm, where market allocation becomes more efficient than internal hierarchical allocation (Eliasson 2009).

The economic and financial environment of entrepreneurial action is one thing, the legal environment another, and here the heavy Soviet policy hand has placed a (at least temporary) debilitating and lasting wedge between the two parts of the dual Baltic economy. The legal tradition and its supporting institutions are the critical underpinnings of the entrepreneurial and competitive functions of a market economy. Commercial law and legal rules pertaining to the rights of investors and the enforcement of these rules come from two broad legal traditions; common law with a British origin, and civil law derived from Roman law. There are only three major civil law traditions: the French, the German and the Scandinavian . Common law tends to give investors the best protection and French civil law the least. The Scandinavian countries that concern us most in this context have a legal tradition that mixes various features of the British common law and German and French civil law. The mixed Scandinavian legal tradition certainly developed as part of the cultural interchange associated with the Baltic trading history (see Chapter 1). The quality of law enforcement is the highest under the Scandinavian civil ¨law tradition (La Porta et al., 1996). The legal background of the Baltic countries is basically Scandinavian, with Russia as the glaring outlier. As argued by Shleifer & Vishny (1996), and important for our country comparison of entrepreneurship, when the law protects investors they can remain small and still hope to get their money back. The lingering heritage of negative institutional circumstances from more than thirty years of Soviet repression therefore has been a severe handicap for the now liberated small Baltic economies.

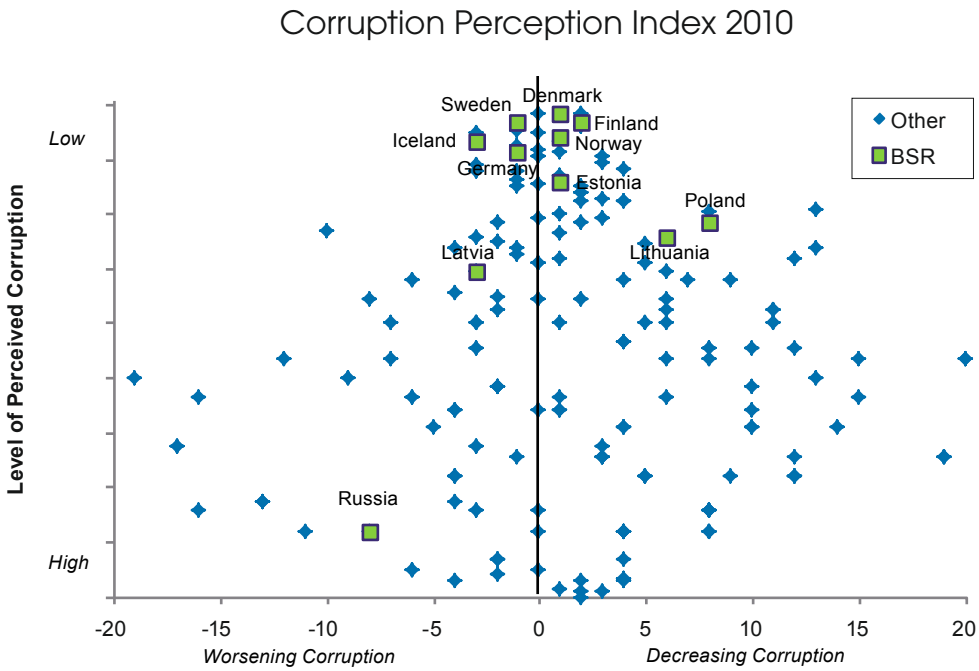
Impediments to entrepreneurial entry (Item 1 in Table 2) are observed negative factors in all Baltic economies that hold back the formation of new firms. There have even been laws that prohibit the layoffs of people and bankruptcy (Exit, Item 4). Together with regulations that slow the reorganization and upgrading of firm performance these factors constitute a negative stimulus for FDI. Similarly, high reservation wages supported by generous social security systems and badly functioning labor markets in the non transition Baltic economies have combined to create political resistance to the fast shedding of redundant labor in failing firms.

The legacy of corrupt legal practices from the Soviet Union was a common problem reported during the intermediate aftermath of liberalization of the Baltic States twenty years ago, as was harassment by tax authorities and the discretionary application of multiple legal rules that could be chosen arbitrarily by courts under control of the political authorities (Eliasson et al 1994, Rybczynski and Wihlborg 1994). All this affected not only new firm formation negatively, but also raised the cost of FDI in the formerly planned economies.

During the immediate post liberalization years investors in the formerly planned economies, therefore, did not find themselves particularly welcome in a Soviet tainted business environment, both when it came to joint ventures and when trying to acquire a company or when starting a greenfield operation. Valuation of ownership shares caused trouble in all three categories and the government agencies constantly involved deliberately slowed, and complicated negotiations when they did not get their demands accepted. This was partly due to cultural differences and ethical codes of conduct, but most of the obstacles to FDI carried directly negative consequences for the receiving transition economy.

Investment ratings conducted by Euromoney 1993,1997 and 1999 show the general risks to property in doing business with Estonia, Latvia, Lithuania, Poland and Russia to be high, and far above those in the other Baltic economies with western traditions in 1993. Environmental risks had however come down to half that level in all transition economies by 1999, except for Russia where they had gone up significantly (Lindström 2003:72ff). The perceived corruption indexes in Figure 16 signal the same picture today. It is interesting to note in this figure, as well as in Lindström (2003), that Estonia has understood the benefits of a good entrepreneurial environment better than the other transition economies.

Figure 16. Corruption Perception Index 2010

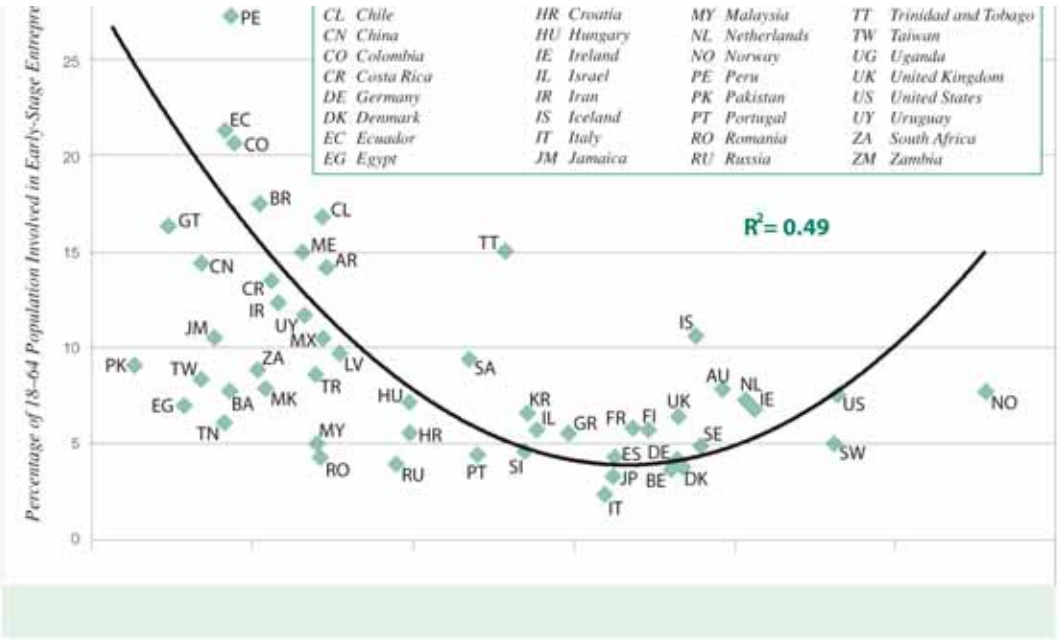


Source: Corruption Perception Index (2010)

Closing a business and the recovering of investments are particularly interesting aspects of a functioning entrepreneurial environment. Under the communist regime closing down an underperforming factory was at times even illegal and always a difficult and drawn out process. However, also the welfare economies surrounding the transition economies have rules slowing the exit process. But there is no comparison with how the formerly planned economies enforce practices that make it difficult to get out of a failed business and to recover the investment. In Latvia and Poland three years were the time needed to recover debt compared to about one year in Denmark, Finland and Norway, and while the recovery rate for credits was just above 30 percent in the two transition economies it was close to 90 percent in Denmark, Finland and Norway. At least in Latvia, however the last four years have witnessed some improvement. So extra care has had to be exercised before engaging in financial commitments in the transition economies.

As in most walks of life conditions tend to improve with ones current performance rating-even though the relationships are a bit complicated. While early stage entrepreneurial activity and per capita income follow a U shaped curve with high rates of entrepreneurial activity in the very poor economies and some of the very rich economies (such as the US, Figure 17A), most of the entrepreneurial activity in the poor economies are of the necessity based type (Figure 17B) and of doubtful long term growth promotion value. Significantly large shares of necessity type entrepreneurship are recorded for Russia and Latvia compared to the industrially advanced Baltic economies. No data is available for Estonia, Lithuania and Poland.

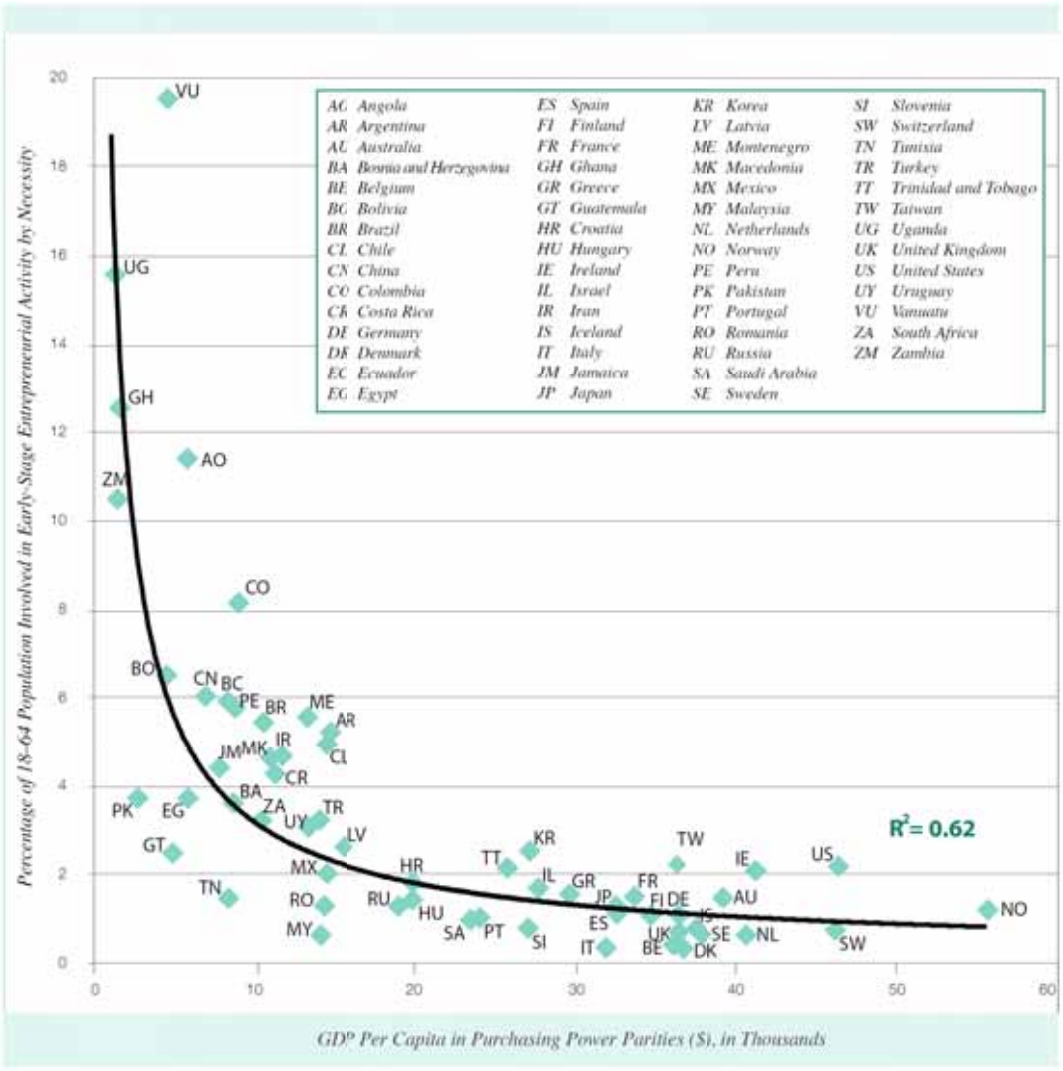
Figure 17a. Total Early – stage Entrepreneurial Activity and Per Capita GDP 2010



[1] Bolivia and Vanuatu a not showed in this figure, because their TEA rates are outsiders

Source: GEM Adult Population Survey (APS) and IMF World Economic Outlook Database

Figure 17b. Necessity – Based Early Stage Entrepreneurial activity and Per Capita GDP 2010



Source: GEM Adult Population Survey (APS) and IMF World Economic Outlook Database

We have concluded that FDI is the perhaps most important entrepreneurial vehicle to move the catching up process in the formerly planned economies and with reasonable speed, but we have also concluded that the formerly planned economies have not been particularly facilitating in that respect. It looks as if policy makers lack the necessary understanding of the underlying market based growth processes.

5. A method of isolating the role of entrepreneurship in growth and catch up on the Baltic Sea Rim

We are now ready to identify the role of entrepreneurship in both capturing the opportunities embodied in, and closing the income per capita gaps in the two parts of the dual Baltic economy over the last twenty years. The bottom line of our analysis, we repeat, is that catch up is impossible without innovative entrepreneurial input in the economy of some sort. One further assumption of ours will be that growth, neither in the individual Baltic economies, nor in the entire Baltic economy, will be improved by policies supporting particular economies at the expense of others. Policy makers in each Baltic economy, rich or poor, should therefore focus on getting their own local competence blocs that support entrepreneurial action and FDI in good shape, and not worry about, or act on things they don´t know how to fix, or that cannot be fixed, and, not least, be prepared to wait for the results.

A policy orientation to avoid, furthermore, is to focus on the support of local R&D in the formerly planned economies and forgot the commercialization side of technology. Plenty of technology is available on the entire Baltic Sea rim. *Key for the transition economies is to access technology, and to commercialize it, not to create it*. That task, however, also requires considerable complementary human capital and competence in scarce in supply in the formerly planned economies. Immigration and repatriation would be the quickest way to achieve this end. But supply of appropriate competence also implies a reorientation of educational institutions.

So the bottom line for policy makers is to get the institutions and the incentives right for strong spontaneous growth through innovative entrepreneurship and FDI.

All Baltic transition economies except Russia (and Belarus) are found to be well on their way to become viable market economies, fully capable of capturing their share of the total opportunities supply. We have found total factor productivity change to be an indicator of entrepreneurial inputs in the economy, although in statistical practice a crude one.[9] It has to be large ex post for entrepreneurship driven growth to have occurred , but measured total factor productivity change can also depend on other factors such as not measured factor inputs or capital gains realized in raw material industries such as oil. The latter has most certainly been the case in Russian growth, and also in the prospering Norwegian oil economy .

9 For technical explanations of this chapter, see the parallel full documentation in Eliasson & Braunerhjelm (2011), notably the technical supplement

We start with assessing the macro influence on production growth in the various Baltic economies of hardware investment and employment variations over the longer run. In principle we therefore wish to perform a systematic total factor productivity change analysis using the fragmented statistical data available. By comparing growth among the various Baltic economies and the share thereof explained by total factor productivity change we should be able to say something on the role of entrepreneurship in the catch up of the formerly planned economies to western standards.

Figure 14 and Tables 5 and 7 give a not expected picture of internal Baltic pick up during the last twenty years. After 1990 all formerly planned economies, as expected, had a "temporary" initial drop down of almost a decade when their inefficient producers were confronted with

Table 5: GNP per capita (PPP adjusted) of resp economy in relation to Swedish, German, Danish, Norwegian and Finnish average

	Lithuania	Russia	Estonia	Poland	Latvia	Belarus
1990	0.52	0.44	0.40	0.29	0.28	0.26
1995	0.31	0.26	0.29	0.34	0.34	0.16
2000	0.30	0.23	0.33	0.37	0.24	0.18
2005	0.39	0.33	0.45	0.38	0.27	0.24
2009	0.42	0.45	0.47	0.45	0.33	0.31

Source: World Bank
Note: The Swedish etc average has not been weighted

Table 6: GNP (PPP adjusted) in Denmark, Finland, Germany, Norway and Sweden (unweighted averages) in relation to corresponding averages for:

	EU	OECD	North America	USA
1980	1.24	1.16	0.81	0.80
1990	1.25	1.13	0.80	0.79
1995	1.24	1.12	0.80	0.78
2000	1.24	1.17	0.82	0.80
2005	1.31	1.19	0.84	0.82
2009	1.31	1.24	0.91	0.90

Source: Conference Board

Figure 18. GDP growth plotted against TFP growth- 15 year averages for the Baltic rim economies

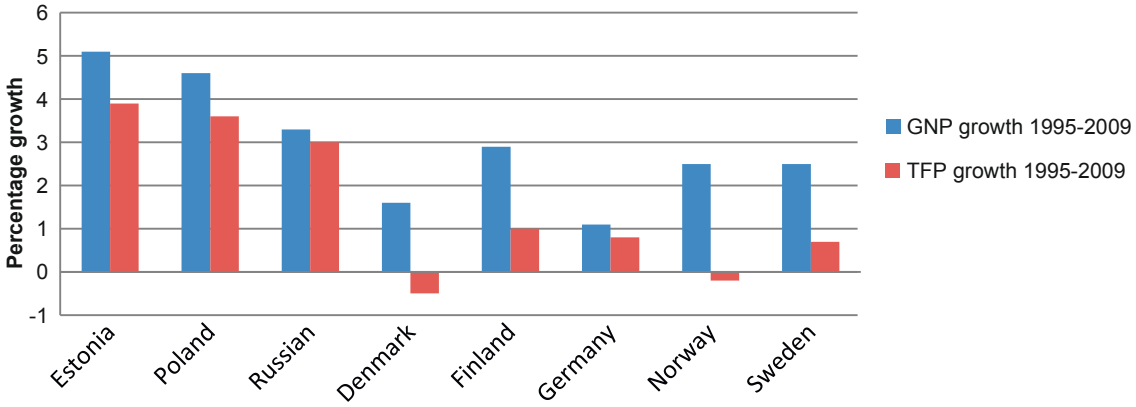


Table 7: GNP per capita (PPP adjusted) in percent of average for Baltic economies, Nordic economies, 7.5 percent of Germany, 10 percent of Russia and 12,5 percent of Poland

	Estonia	Latvia	Lithuania
1995	41%	34%	40%
1996	43%	35%	42%
1997	47%	37%	43%
1998	50%	38%	45%
1999	48%	39%	43%
2000	51%	40%	43%
2001	54%	42%	45%
2002	58%	44%	47%
2003	61%	47%	51%
2004	63%	49%	53%
2005	67%	53%	55%
2006	71%	57%	57%
2007	73%	60%	60%
2008	69%	57%	61%
2009	64%	50%	55%
2010	60%	46%	51%

Source: Conference Board

western competitors, and shed labor massively, or collapsed, driving up unemployment. So much can be ascertained even though national accounts statistics on the formerly planned economies are notoriously bad.

By 2009 (Table 5) according to World Bank national income statistics Lithuania seems not to have recovered back to its initial " favorable" position 1990 at half the per capita level of income of the average of Denmark, Finland, Germany, Norway and Sweden. Soaring oil prices pulled the Russian Federation statistics back to its original 1990 position of 45 percent in 2009. But Russia's public budget and future growth prospects depend on oil prices staying above the $100 level.

Latvia and Belarus fared somewhat better, but from a very much lower initial position. 2009, however, was a particularly bad year for the formerly planned Baltic economies, then hitting the bottom of the recession, that hurt the formerly planned economies harder than the rest of the Baltic economy. Per capita income in Latvia and Belarus still remained at just above 30 percent of the level of their wealthy neighbors, up from just below in 1990.

The best performers have been Estonia, up from 40 percent to 47 percent, and Poland, up from 29 percent to 45 percent. Not much, however, for a 20 year period. Still however, that relatively positive performance of Estonia and Poland is probably explained by the relative closeness of these countries to Finland and Germany respectively, and as receivers of relatively more FDIs. With the exception of Estonia and Poland we thus cannot talk about anything near a catch up, so the question is why.

The catch up picture looks somewhat different if we use Conference Board data (Table 7) on GDP per capita for the three Baltic transition economies and compare with a weighted average of the Baltic and the Nordic economies , part of Germany , Poland and Russia 1995 through 2010. For some reason Estonia now begins in 1995 at a relatively higher level than in Table 5 and experiences a fast catch up together with Latvia and Lithuania through 2007 to 73, 60 and 60 percent respectively, only to drop back by ten percentage points, or more to 60, 46 and 51 percent by 2010. During the years 2000- 2010 earlier entrepreneurial activity, if existing, should have had the time to materialize in the form of output growth. The higher levels are explained by the lower reference denominator.

Whichever way we look at the data, catch up is disappointing. Why is this so? First, 2009 was a

year of an exceptionally deep recession in the Baltic transition economies, so the catch up has been underestimated, and the economies lagged further behind in 2010 (Table 7). It should look better in 2011. Second, the non transition economies on the Baltic Sea rim have grown faster on average than the EU and OECD group of economies, and even compared to North America (see Table 6), so "correcting for" the faster than " global " growth of the non transition Baltic economies , the catch up of the Baltic transition economies to western standards looks better. Bench marking to the non transition Baltic economies may therefore have been unfair. The more rapidly growing non transition Baltic economies should have exercised an extra demand pull on the transition economies through exports and FDI.

The interesting thing is that Table 8 suggests that the reason for the faster growth of the industrially wealthy Baltic economies is neither entrepreneurial, nor moved by intangible investment. TFP change is small. Growth in the wealthy Baltic economies during the 15 year period 1995/2009, contrary to the Baltic transition economies, has been much slower, as has TFP growth there, bordering on insignificant, or (in Denmark and Norway) even negative. Plotting the 15 year averages for all Baltic economies in Figure 18, the positive correlation between the averages is however obvious, high TFP growth being associated with high growth in output, as it should be in an economy the expansion of which is not based on growth in labor and physical capital factor inputs, but on technology and entrepreneurship..

There is also little evidence (see Chapter 2) that the superior performance in the transition economies has been driven by new firm formation. Entry rates and self-employment are on the same, or lower levels compared to the wealthy Baltic countries. The self employment data in Figure 4, being relatively low in 2010 in the Baltic transition economies rather tell the opposite story.

The wealthy Baltic industrial countries belong to the privileged group of economies with the highest per capita incomes in the world. Even though growth suffered in the backwaters of the oil crises of the 1970s, it exceeded the income growth in the industrial world somewhat during the last 20 years, and caught up somewhat on all four regions (Table 6). So the neighboring industrial competence base of the formerly planned Baltic economies to learn from has been favorable, as has been their close export markets.

Total factor productivity change among the various countries, and among the formerly planned economies in particular, has been very

Table 8: GNP and TFP growth in the Baltic economies, five year and 15 year averages

	Estonia		Poland		Russian Federation		Denmark	
	GNP	TFP	GNP	TFP	GNP	TFP	GNP	TFP
1990/94	-	-	-	-	-	-	2.1	0.9
1995/99	5.7	6.0	6.0	-0.9	-1.1	-0.4	2.8	-0.2
2000/04	8.0	4.3	3.2	5.0	6.9	7.9	1.5	0
2005/09	1.6	1.5	4.7	6.7	4.1	1.6	0.4	-1.2
1995/09	5.1	3.9	4.6	3.6	3.3	3.0	1.6	-0.5

Source: The OECD

	Finland		Germany		Norway		Sweden	
	GNP	TFP	GNP	TFP	GNP	TFP	GNP	TFP
1990/94	-1.2	0.8	2.9	1.6	3.3	3.0	0.1	0.2
1995/99	4.5	2.3	1.7	1.3	3.9	0.7	3.4	1.4
2000/04	3.1	1.4	1.1	0.6	2.3	0.9	3.0	1.5
2005/09	1.1	-0.6	0.6	0.6	1.3	2.2	1.0	-0.9
1995/09	2.9	1.0	1.1	0.8	2.5	0.2	2.5	0.7

Source: The OECD

jumpy during the period 1990 to 2009, and remains jumpy even when we look at five year averages. This can to some extent be explained by the econometric methods, but also signals quality problems with the data.

We had however expected unmeasured intangible technology inputs (spillovers from for instance R&D) to be larger in the wealthy Baltic economies, and probably insignificant in the formerly planned economies. Instead the entrepreneurship element in total factor productivity growth seems to have been relatively smaller among the wealthy industrial countries on the Baltic rim, and vice versa for the transition economies. TFP growth in the Baltic transition economies for which we have data has been rather high, signaling either entrepreneurial new firm formation, FDI contributions or raw material rents. Since new firm formation has not been particularly impressive that leaves FDI and raw material capital gains. Oil clearly must explain most of TFP change in the Russian Federation. This country furthermore, together with Belarus ranks at the bottom of institutional environmental background, so we would not be inclined (see below) to associate the fact that Russian incomes per capita have not lagged behind with any form of entrepreneurship. This leaves the catch up of the two high performers Estonia and Poland (we don´t have the corresponding data for Lithuania and Latvia[10]), as having been driven by some form of entrepreneurial input, and then notably through FDI. *The remaining explanations must therefore be looked for in the entrepreneurial environment of those countries.*

10 And none of the two have experienced much of a catch up.

6. The Role of Innovation and Entrepreneurship in Baltic Growth and Catch Up – Results and Policy Proposals

Discussion over the last twenty years about how to get the formerly planned economies on a fast and sustainable growth path has swayed between the two extremes of industrial policy directed resource allocation, close to central planning, and more market competition guided policies arguing that it is more important in the modern knowledge based economies to get the institutions that determine entrepreneurial incentives and market functions right. We also argue that the market knows best, and that effective policy for the long run has to get the entrepreneurial environment in good shape. In the midst of this policy discussion we note that Scandinavia has had its own industrial policy tradition, not least Sweden, even though all Scandinavian economies have kept their doors open for foreign competition. Most western countries have in fact experimented with more or less far reaching industrial policy directives, and there are some empirical results on the outcomes.

The impact of different political environments on entrepreneurial activity is compared in an interesting paper by Okamuro et al (2011); that of Japan, characterized as a managed economy and that of the Netherlands, labeled entrepreneurial. The distinction is more or less the one between directed and market guided industrial policies made above, even though the policy of improving the market institutions does not appear to have been as clearly applied in the Netherlands as would have been desired for the analysis.

In the managed market environment of Japan large incumbent firms, exploiting economies of scale in a relatively predictive environment dominate, while small flexible, knowledge intensive firms operating in largely uncertain environments are more characteristic of the Netherlands.

On this it can also be observed that all formerly planned economies of the Baltic region have taken significant steps to eliminate their legal Soviet heritage, i.e. all except Russia itself, that continues to rank very low at the bottom of the corruption perception index (see Figure 16 in Chapter 4). Latvia, Lithuania, Poland and Estonia in particular, on the other hand, now rank very high on the same index, immediately below their Scandinavian neighbors and Germany (State of the Region Report 2010, section A:37).

6.1 Conditions for successful entrepreneurial policy

Entrepreneurial activities, we have concluded, determine the outcome of the catch up process of the formerly planned Baltic economies. Catch

up has however been slow when we look at the possible macroeconomic effects of indigenous new firm formation. New firm establishment is what research tells should move long term growth in the advanced industrial economies , but it is a slow process and should not be expected to occur spontaneously in the formerly planned economies where the market supply of commercialization competences is more or less lacking. So even vigorous new firm establishment would take decades, rather than years to filter out sufficient winners to make a difference at the macro level.

For more speed, and larger leverage on macro growth entrepreneurship in the formerly planned economies has to be supported by significantly larger inputs from the wealthy neigbours in the form of FDI. Even so, entrepreneurial inputs conveyed through FDI have not contributed that much to catch up during the 20 years of freedom from Soviet containment. Since significant elements of Soviet institutions and mentalities to a varying extent still linger in the Baltic transition economies, the reasons for the slow catch up should first be looked for in the entrepreneurial environment of the formerly planned economies. If more speed is desired the viable policy method should be, we conclude, to make the local entrepreneurial environment more attractive and in ways Estonia has pioneered. To the extent policy makers in the formerly planned economies succeed in that endeavor, we furthermore conclude, they will also have contributed to growth in the entire Baltic economy.

Education and R&D are always good, but not critically scarce factors in the transition economies. University entrepreneurship is too far fetched a policy proposition for growth for economies that lack basic commercialization competences. The scarcity is rather lack of experience on the part of labor to work with modern technology and equipment and here universities and public laboratories have little to contribute. This explains the low wages, but also that manufacturing FDIs have primarily been directed at unsophisticated outcontracting jobs, rather than the advanced production needed for fast learning and sustainable catch up. We conclude so despite the fact that Estonia can show two spectacular entrepreneurial success stories (Skype and Playtech), developed there on the basis of local labor (programming) skills, but created, in the case of Skype, by outsider (Swedish and Danish) entrepreneurial inputs.

6.2 Policy propositions

Substantial financial investments, notably in Estonia from Finland and Sweden, that might have contributed to local commercialization competence apparently were not of the right kind. Swedish and Finnish banks have reduced their presence considerably, in some cases after large losses. At this level the problem of human capital is rather to optimize the commercialization of what skills that are currently supplied, and then patiently wait for learning and experience to raise the skill supplies. The acute human capital scarcities are found at higher industrial management and engineering levels, a problem which for the time being can only be overcome through contributions from outside the formerly planned econo-

mies. As a consequence we point to four critical areas for policy action of the *facilitating kind*:

1. *Industrial knowledge transfer* within the region on a much larger scale than has occurred so far is critical both for growth of the entire Baltic economy, and for a faster catch up rate. Since the knowledge needed primarily resides outside the transition economies, the creation of an attractive environment for local investment by external investors comes before other policy action. Local firms in the formerly planned Baltic economies not only have to succeed in commercializing the existing knowledge base, but also in building larger local firms on the basis of more advanced immigration of industrial human capital, not on cheap labor. This will require *trade in intangible assets* (marketing and brand knowledge, organizing geographically dispersed activities, logistics, etc) over local markets that do not yet exist in the formerly planned economies, but possibly in the wider context of the entire Baltic economy. To facilitate the local development of more advanced markets for venture capital and private equity services should therefore be a prime policy objective. And this task involves much more sophistication than establishing commercial banks.
2. A particularly important platform for the development of large manufacturing firms that could potentially serve as a hotbed for entrepreneurship and new firm establishment would be the development of a broad based market of *specialist subcontractors* (Braunerhjelm 1991, 1994). When new and small firms can develop in a market symbiosis with large firms , the large firms will also serve as competent customers (Table 3) and contributors of user knowledge. It looks as if closeness to Germany has given Poland a competitive advantage here. So eliminating remaining national barriers to the establishment of a cross national integrated market for specialized subcontractor services available to the entire region, and exploiting the Baltic sea transport advantage, should be one prime policy objective of each individual Baltic economy. The sea transport capacity could be developed into an attractive alternative to crowded land transports in the entire Baltic economy, being more reliable and faster than road transports.
3. Also critically needed for catch up is a quicker fix of existing "large" businesses and SMEs through FDI and immigration of higher level management and engineering know how from the surrounding wealthy Baltic countries to optimize the commercialization of existing resources, through generous "privileges" for those who choose to stay permanently. Central directives of the picking winner type are likely to be counterproductive in matters like these where the markets know better. And the policy makers of formerly planned economies could here play a clever game with the surrounding rich welfare economies by simply offering a sounder and more attractive (for entrepreneurs) tax climate than they already do. Encouraging expatriate investors to return to establish permanently in their homeland would be a rational and workable policy proposition.
4. While the Baltic economies would all benefit from further reductions in barriers to investment and trade across their borders, what matters in the long run is the quality of their general entrepreneurial environments. This is where national policies should be focused, eliminating .." and so on, and then add three lines down " There is little need direct policy cooperation here".

   In fact, one important problem for Estonia, Lithuania and Latvia is that their economies are both much to small and different (language, culture , religion, policies etc) with plenty of problems working across the borders from one place. Foreign investors initially, but mistakenly regarded them as one market, and then finding them less worth the effort. Had I understood this earlier I would have made a point of policy cooperation to unify the three small economies as one market place in this respect. To late to put that in now. Would look like a paste on.

If such a competition could be incited also in, and forced on the wealthy Baltic welfare economies that have long suffered from stagnating entrepreneurship and ailing big firms a gigantic *positive sum growth game on the Baltic rim might have been politically established*.

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Final observations

Another fall and winter, another harsh economic environment to prepare for. Following a year of strong economic growth in most parts of the Baltic Sea Region, the signs are yet again set for a more challenging future. The Region has come out of the first phase of the global economic and financial crisis better than most of its peers. The collapse of world trade hit the mainly small open economies of the Region particularly hard. But their solid financial markets and macroeconomic policies also helped them to stage an impressive recovery. An important element was the ability to keep domestic demand stable during the crisis, using a mix of expansionary fiscal and monetary policy measures as well as active labor market policies. The second phase of the crisis, with the focus shifting to sovereign debt, is now shaking financial markets again. The Baltic Sea Region will not be able to escape the fall-out from this renewed uncertainty. Low growth in key markets, difficulty to access capital on globally connected financial markets, and rapid shifts in currency and equity markets will reduce growth in the Baltic Sea Region, despite the strong fundamentals that the Region offers.

Competitiveness across the Baltic Sea Region remains solid, with many parts of the Region retaining or even strengthening their position among the global leaders in areas such as institutional quality, company sophistication, skills and innovative capacity, infrastructure, demand sophistication, and the openness of markets. The Region has, however, some inherent challenges such as its geographic position at the periphery of Europe and the low grade of urbanization in parts of the Region. This year's Report revealed the broad range of policy measures that many countries in the Region are engaged in. If there is insufficient upgrading of competitiveness, it is not for lack of trying. The challenge remains to achieve stronger impact and this is an area where the Region's countries could and need to do better, as many of their peers globally. Despite its strong competitiveness, the Region is losing global export market share, a process that was further accelerated through the crisis. The drivers are the stronger growth dynamics in other parts of the global economy, especially Asia, and the gradual shift from exports to foreign direct investment as the dominant mode of internationalization. Competitiveness strategies need to be reviewed as to their ability to retain and grow value creation domestically.

Collaboration across the Baltic Sea Region continues to be a significant asset compared to many other parts of the world, including those European regions next in line for an EU Macro-regional strategy. The EU Baltic Sea Region strategy has been a powerful tool to better align the activities of the many regional institutions and networks, including the decisions made by the international financial institutions active in the Region. The EU strategy has met the more optimistic expectations of better coordination among existing efforts. But the commitments made at the outset, not to create new institutional structures and new financial instruments as well as the inevitable shift of political attention to other issues like the economic crisis, has limited the wider impact of the strategy. With the experience of the first years of implementing the strategy, and a different policy environment in the EU than five years ago,

it should be possible to review some of the commitments made then.

Looking ahead, the main challenges for the Baltic Sea Region are external. The Region has limited influence on the policy choices in Europe and elsewhere that will influence, which path the global economy is further going to take:

- The Region is facing a rapidly deteriorating economic environment, with flagging global demand and tightening financial market conditions. And there is much less room for an aggressive monetary and fiscal policy response now than there was two years ago.
- The Region is combining the ambition of creating an increasingly integrated economy with significant volatilities in exchange rate relations given the broad range of monetary policy arrangements. And while some parts of the Region still want to join the Euro-Zone, for others this seems farther away now than it has for some time.
- The Region has to deal with a changing global economy, where slow growth in Europe and a growing role of FDI to serve foreign markets raises questions about the level of prosperity based on the traditional competitiveness of the Baltic Sea Region economies.

All of these challenges are complex, and there is no simple solution available for either of them. The Baltic Sea Region is well advised to pursue the approach of gradual change combined with a focus on a few fundamental key policies that have served it well over the last twenty years, including the recent crisis:

- Macroeconomic solidity, especially on fiscal policy, is a key necessity. Credibility over the long-term strategic course creates room to be flexible in the short run. This has worked well during the recent crisis for those countries in the Region that followed this approach. And it will make it easier for them now to deal with the renewed uncertainty.
- Strong overall competitiveness is the basis for sustainable growth. Other countries have struggled to meet the competition from new rivals and kept their economies temporarily afloat with credit-financed demand. Large parts of the Baltic Sea Region have grown based on their competitiveness fundamentals and have proven to be much more resilient.
- Deeper market integration remains crucial for the Region. It can reduce the limitations of a small region and create a stronger buffer of local demand against the vagaries of global cycles. Progress on this path has, however, been too slow and will require a renewed push.
- The EU Baltic Sea Region strategy has been a clear benefit for regional collaboration. It can become even more effective if the self-imposed restrictions on institutional and financial architecture are removed. Neither new institutions nor new money are critical. But in both areas a revision of the current structures could significantly benefit the Region.

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