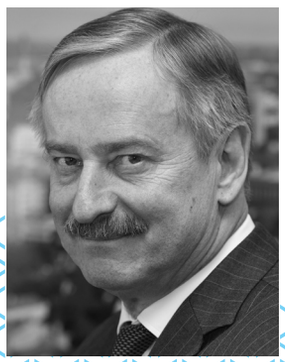
BRE REVIEW

# BALTIC RIM ECONOMIES

APRIL 2014
ISSUE NO. 2



**SIIM KALLAS** Rail Baltic – a vital transport link to connect East and West

**SIGMUNDUR DAVÍÐ GUNNLAUGSSON** Together we stand stronger – the importance of regional co-operation

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# BALTIC RIM ECONOMIES

BRE REVIEW

The Pan-European Institute publishes the Baltic Rim Economies (BRE) review which deals with the development of the Baltic Sea region. In the BRE review, public and corporate decision makers, representatives of Academia, and several other experts contribute to the discussion.

The Pan-European Institute gratefully acknowledges the contribution of Russian Venture Capital (RVC) in receiving the articles dealing with innovations in Russia for this issue.

Pan-European Institute

ISSN 1459-9759

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(responsible for writer invitations)

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SIIM KALLAS

# Rail Baltic – a vital transport link to connect East and West

Expert article • 1477

One of the main aims of EU transport policy is to bring our peoples and economies closer together. We need transport to access a huge market: the unified trading space of Europe's 500 million consumers.

But this vast area is not always well connected, especially between East and West.

Many people and businesses are losing out, particularly on the economic advantages offered by the single market.

For countries on the edge of Europe, like Finland and the Baltic States, to have good transport links to Europe's heartland is a political and economic lifeline.

It is why Rail Baltic should be built as soon as possible, to link these countries with the rest of Europe. At the moment, however, it is one of Europe's six major missing cross-border links, as recently identified by the European Commission.

With the revised policy guidelines for the Trans-European Transport Network and the Connecting Europe Facility (CEF) funding instrument now in place, we can begin to transform today's patchwork of national parts into a smooth-running network.

These two new regulations represent the future of EU transport infrastructure, shifting the focus from individual projects to a core network of nine strategic integrated corridors.

Rail Baltic will form the northern section of the North Sea-Baltic corridor, adding a vital north-south link to complete the high-quality transport links around the Baltic Sea area that are already creating regional trade and economic growth following the financial crisis.

It is not only the Baltic Sea region that will see more trade.

When it is built, this double-track higher-speed line will benefit much of Europe because the North Sea-Baltic Corridor will link to Europe's three largest ports: Rotterdam, Antwerp and Hamburg. By increasing connectivity, we also increase competitiveness, economic growth and attract investment.

The business case for Rail Baltic is solid, although EU funding will be required as well. That's where the CEF comes in: assuming a mature project pipeline for designing and building the new line, the EU can provide financial support of up to 85%, with loans from international financial institutions that will have to be secured to make up the balance.

In the most recent 2011 study on Rail Baltic, international consultants AECOM estimated the project's net present value at around €1.4 billion at 2010 prices in its cost-benefit analysis. It concluded that the project should be considered as viable and financially stable.

Investing in such infrastructure projects has a positive effect on employment.

One recent U.S. study showed that infrastructure investment spending creates about 18,000 total jobs for every $1 billion in new investment spending.

When examined in a wider geopolitical context, the business case is even stronger.

Take Finland, which - along with Poland - forms part of Rail Baltic's wider catchment area.

One of the shortest ways to move freight from Asia to Europe is across the Arctic Sea and then into Finland and the Baltic States.

While this isn't the usual shipping route taken through the Suez Canal, it now competes as an Asia-Europe freight route since melting ice caused by global warming allows the Arctic Passage to open up for more months of the year.

This potentially cuts journey times by two weeks, reducing shipping costs.

In the nearby Barents Region, Finland, Sweden, Norway and Russia are working together to develop an efficient transport system to increase access to Europe's richest region for natural resources.

This area has large deposits of minerals and precious metals, an abundance of forestry and fish products and a vast export potential for oil and gas resources.

Linking our own Trans-European Transport Network to the future Barents Euro Arctic Transport Area would be immensely beneficial for trade. In fact, with the Rail Baltic gateway ready to receive cargo via Finland and send it on into the heart of Europe, I can only see trade and economic advantages for Europe as a whole.

Finnish timber and paper products could be sent by rail to Central Europe; in the other direction, Rail Baltic could be a useful export route for Czech and Slovak cars and trucks.

The line will also ease the environmental impact on the region by taking heavy freight off roads. It will provide a viable alternative to shipping; today, some 90 % of Finland's exports and 70 % of its imports go by sea.

Rail Baltic is about far more than the indication in its name.

It goes further into Europe; it links peoples, businesses, regions, towns and capitals together; it truly joins East and West.

We cannot afford to delay building this vital transport link that has so much promise for connecting Europe. ■

**SIIM KALLAS**
Vice-President of the European Commission in Charge of Transport
European Commission

SIGMUNDUR DAVÍÐ GUNNLAUGSSON

# Together we stand stronger – the importance of regional co-operation

Expert article • 1478

Iceland is a small island nation. In total we count just over 320.000 inhabitants in this land of fire and ice in the middle of the North Atlantic. We are proud of our history and culture and the last few decades of our young republic have been characterised by progress and prosperity, although we have surely gone through some challenging times and still the Icelandic nation is working its way – slowly but surely – out of enormous economic difficulties caused by the universal financial crisis in 2008.

However, no man is an island and certainly not in an era of globalisation and rapid technological developments. Iceland is a European nation and a member of a market counting over 500 million people through the Agreement on the European Economic Area. Our major trading partners are European and we have our closest cultural and political relations with European nations. Iceland also focuses on interacting with the countries of North America. Until 2006, U.S. military forces were based in Iceland and still today Iceland builds its defences on a bilateral defence agreement with the United States and on a founding membership of NATO. In addition, the relations with Canada are close and growing. Approximately 200.000 Canadians of Icelandic origin (or "Western-Icelanders" as we tend to call them) are living in Canada, descendants of Icelanders who moved to Canada in the 19th century in search of a better livelihood and new opportunities. Furthermore, global warming and the melting of the ice cap in the Arctic is changing geography and the Asian continent is not as far away as it used to be.

> The Nordic countries and our cousins alongside the Baltic Sea have many things in common but our strength also lies in our distinctive features.

Hence, Iceland looks to the east, west and north in pursuing its interests and interacting with the world. Still, the Nordic countries stand closest to Iceland. This is evident in many ways. Nordic societies are based on the same values and our common cultural heritage is truly a binding force. The Nordic welfare model attracts widespread admiration and our societal infrastructures draw attention from different corners around the world.

Nordic co-operation is also very close and, this year, Iceland will be in a leading role as it holds the presidency of the Nordic Council of Ministers. Moreover, the Nordic countries are like-minded in the international arena and, as a group, can have a great impact whereas, together, some 26 million people live in the Nordic countries and their economies, combined, constitute the fifth-largest in Europe and among the ten largest in the world.

In addition, the Nordic co-operation has developed rapidly in recent years, for example in the field of security and defence. In 2011, the Nordic countries adopted a declaration, which is symbolic for solidarity - that the Nordic countries will stand together and assist each other if, for example, natural or man-made disasters occur. Also, earlier this year, new steps were taken in Nordic defence co-operation when Finland and Sweden participated in training and air-surveillance in Iceland, alongside a NATO air-policing mission, which Norway spearheaded.

Nordic co-operation has also been fortunate enough to be flexible and dynamic in nature. Thus, our friends in the Baltic countries have become more involved and contribute to our co-operation - a very positive development that Iceland supports wholeheartedly. The Baltic countries have a special place in the hearts and minds of the Icelandic people and Iceland is very proud to have been the first to recognise the regained independence of the Baltic states in 1991. The relations between Iceland and the Baltic countries are also diverse and we often share emphases in international relations, for example within NATO.

Likewise, Iceland values the friendship with other countries in the Baltic Sea region. The Icelandic people will not forget the support the Polish nation showed us when most doors seemed to be closed in the storm of the financial crisis some five years ago. Also, a good number of Poles live in Iceland, who have adjusted well and contribute to the well-being of our society.

Therefore, regional co-operation of various sorts has proved beneficial for Iceland and the importance of regional organisations should not be underestimated. Bodies such as the Council of the Baltic Sea States, the Barents Euro-Arctic Council, the Nordic Dimension and the Arctic Council, to name just a few that Iceland participates in, have proved a valuable instrument in fostering regional co-operation.

The Nordic countries and our cousins alongside the Baltic Sea have many things in common but our strength also lies in our distinctive features. Some of us are members of NATO while others are members of the European Union. And some of us sit on both sides of the table in Brussels. To some extent, our relations with our closest neighbours differ and we can, when successful, build bridges and contribute to compromises and creative solutions. In some cases we disagree, yes, but far more often we are in agreement.

I sometimes say that the Nordic countries are our closest family, but our extended family certainly includes the Baltic States. The extended family is always important to foster. There will always be times where we need each other and together we stand stronger. ■

SIGMUNDUR DAVÍÐ GUNNLAUGSSON
Prime Minister
Iceland

JOACHIM ZELLER

# Giving up Russia?

Expert article • 1479

Russia is the largest European State and the bridge from Europe to Asia. It is at the same time the biggest energy provider for the European Union. 80 percent of its natural gas and oil is being delivered to the EU. In our and the Russian neighbouring States, formerly part of the Soviet Union, Moscow still has a significant influence. Therefore, the efforts made by the European Union to achieve a deepened relationship in the framework of a strategic partnership are indispensable. Due to the events in Ukraine and the de facto annexation of the Crimea, serious disruptions of the bilateral relations established over years have occurred.

But for the foreseeable ice age, Russia does not have sole responsibility. The West has also contributed to the fatal destruction of trust. With the unilateral attempt to bind Ukraine, it has ignored Russian interests, being those legitimate or not. The EU has not understood that for Russia, Ukraine will never be just another country. It has underestimated the atmosphere in the pro-Russian eastern part of the country as well as Kremlin's willingness to re-assert its sphere of influence in the post-Soviet space and its military commitment to achieve it. By now, the EU has to question itself, whether it has been the adequate strategy to negotiate unilaterally with Ukraine, without including Russia on an equivalent basis. Anticipating its interests and embedding it prudently in the framework of the Eastern Partnership might have been the wiser approach. The "Either-Or"-strategy, to which Ukraine was exposed - not only by the EU but rather Moscow - could not succeed since the country is historically divided. From a Russian perspective, the Majdan Revolution was a successful attempt by the EU to establish a pro-western regime in Ukraine. Without Ukraine, Putin's dream of a Eurasian Empire would become obsolete. And his nightmare would be the spread of a similar democratic protest movement to the Russian people. About Ukraine's historical affiliation, all kind of theories have been raised. Some say, it would belong to the Russian culture, others claim Ukraine being a Central European State. Both are truths and this makes things so complicated. For a long time, even the EU was not willing to give a definitive answer. What was really at stake, European leaders did not understand until hundreds of thousands waved the European flag on Majdan. Unexpectedly, the EU got drawn into a conflict, forcing it to a clarity and unity which it does not have in foreign policies. A fact, Putin is well aware of. However, demonising him is no (common) policy, but just an alibi for not having one, as Henry Kissinger rightly said.

Until recently it seemed inconceivable that people would risk their lives to lead their country into the EU. Brussels has raised expectations in the Ukraine which cannot be turned back. Of course the West could not ignore an invasion contrary to international law. But it would be naïve to believe that a solution could be reached without the involvement of Russia. Isolating it would put a dangerous pressure on Russia at a point where its borders are already fragile and its internal problems overwhelming. Russia suffers from terrorism, separatism and a lacking progress in the modernisation of the economy. It owes its relative wealth to the unilateral focus on raw materials and export of arms. If Russia wants to give prosperity to its people, this will only be possible with the outlined partnership for modernisation. At the same time, Moscow has to understand that the desire of Ukrainian people to draw closer to EU standards and ban corruption is an irreversible reality. Putin has created a precedent in Crimea in an unacceptable way, a fact not less an irreversible reality. In the future, a modus vivendi must be found for this geopolitical reality. An escalation would lead to a devastating East-West confrontation and impede for decades any chance to bring Russia and the EU together in an international cooperative system. Of course, EU negotiations of a new agreement with Russia will be suspended for the time being, and sanctions were inevitable. Time will show how effective they may be and who will most suffer from them. But sanctions are no strategy, nor substitute for a diplomatic engagement. We must ensure that our channels of communication and cooperation are left open. Even if a sound cooperation with Putin seems not feasible at the moment, we have to think our relations in a long term. On a long term, neither the West nor Russia can exist without the other and cope with the imperative challenges we are facing. Iran´s nuclear programme, the middle-east conflict, the war in Syria, the territorial disruptions in the Pacific, which of these problems should be solved without Moscow? By now, the EU will have to learn to live with Putin. Facing this fact, it would already help to stop thinking in black and white as in former times, with the anachronistic allegory of the good West and the bad East. In the context of a functioning Common Security and Defence Policy, the EU has to clarify how it intends to deal with Russia in a continued partnership. If Member States keep maintaining unilaterally their interests and relationships to Russia, and the EU is supposed to deal with the troublesome leftovers such as Human Rights and rule of law, this partnership is doomed to fail. ■

**JOACHIM ZELLER**
Member
European Parliament

KRISTIINA OJULAND

# EU-Russia relations – on the verge of breaking

Expert article • 1480

EU relations with Russia have always been special due to this country's indisputable strategic importance for the European security construct, its strong economic ties with the European countries and centuries of common history. This relationship has not been easy, though, and seems to have gotten to its darkest times in the recent months.

As many common interests there are to share between the EU and Russia, so there are a lot of issues on which both sides hold a totally different approach. This concerns, primarily, the Eastern Partnership and Ukraine, which president Putin considers Russia's "near abroad" and a traditional zone of Russian influence. The efforts of the EU to bring these countries closer to itself by supporting democratic reforms and offering the chance to access the European markets through free trade agreements are, unfortunately, seen as a direct challenge in Kremlin. It is a regretful misinterpretation of the true nature of the European intentions, the final goal of which is a safe and prosperous neighbourhood, consisting of countries with stable democracies, responsible governments and predictable foreign policies. The Eastern Partnership was never thought as – and surely is not – a zero-sum game of "taking away" whole countries away from Russian control. In fact, it is these countries' sovereign choice to move towards greater EU integration.

The experience of Estonia clearly shows that the European integration is, currently, the best available model of political and economic development. The changes we had to do in our governmental and legal systems, industry, agriculture and virtually all sectors of social life where not easy, but the end results were incredibly rewarding. Today Estonia is a successful country, its expertise in information technologies is recognized not only the EU, but also worldwide and it is moving forward along with other European nations. This is why it is my strong conviction that the European integration is the most gratifying and also natural direction of development for our neighbours.

The fact that political thinking in Moscow is different has already caused lives in Ukraine, deprived it of Crimea and is likely to provoke more unrest, military confrontation and disorder.

Many might feel the EU is helpless in front of the fast pace of developments and cannot pressure Russia because of the bilateral ties and economic interests. It is true that the EU is Russia's largest trading partner by far, with 45% of all Russian external trade, and Russia is the EU's third most-important trading partner, after the US and China. It is clear that economic sanctions or embargo on Russian gas, oil or goods in general will impact unfavourably European economies. It is also true that security on our common continent and beyond can only be achieved if Russia and the EU cooperate closely.

It is also true that security on our common continent and beyond can only be achieved if Russia and the EU cooperate closely.

In this light, the recent acts of aggression against Ukraine only come as a proof to the fact that the EU should have been much more insistent on following its own values and principles in relations with Russia: to underline the inadmissibility of human rights' violations that have been taking place in Russia for many years now; to punish the officials guilty of human rights' breaches (and for that matter, of Sergey Magnitsky's unlawful detention and eventual death) with visa bans and assets freezing; to support more, with deeds and not words, civil society organizations in Russia.

The continuous fall into autocracy in Russia resulted in the current crisis. Had it been a truly democratic country, the Russian government would have taken into account the considerations of international law and, most importantly, the needs and hopes of its own people. Today, instead, the EU must realize its past mistakes in policies towards Russia and think of a new approach that would discard the former asymmetrical relationship, where only one side strives to be constructive and the other is pursuing its own national interests. ■

KRISTIINA OJULAND
Member
ALDE group
European Parliament

CARL SCHLYTER

# Time to focus on human growth instead of economic growth

Expert article • 1481

Latvia has a credit problem - the solution, growth. Finland escaped the Eurozone crisis rather well but recently a problem has arisen, no growth - the solution, return to growth. Sweden is not a Euro country but has high unemployment - the solution, growth. Estonia deregulated capital had fantastic growth but 500% housing price hikes in 7 years takes its toll, bubble burst and recession followed. The solution - more growth.

Whatever the question, the answer is growth. The problem is that infinite growth on a finite planet is difficult for anyone but an economist to grasp. As an engineer I immediately see the problem of resource scarcity. Not to worry answers the economist, we will decouple the economy and achieve green-growth. As a house-owner I am worried that deregulation will lead to a housing-market collapse. Not to worry, if economy slows we will just reduce interest-rates and make ECB increase capital, is the economist answer. Who can resist buying a million Euro house when the loans are almost free?

But when more and more of the economy is based on loans, will not a constantly larger share of our income go to the rich who owns the banks? Will not more and more of the efficiency gains made at any company go to the owners and banks when they become heavily indebted? Not to worry answers the economist, money will trickle down to you to. Well, that is hardly of any comfort if it at the same time floods upwards creating growing social tensions.

The current growth model based on extreme liberalisation of capital creates bubbles and bursts, increased resource use and growing social tensions. It is utterly strange that almost all political parties still advocate it as the dominant solution to all problems.

Let us study how realistic and good we (SWE,EE,LT,LV,FI) are when it comes to “green growth”. All Baltic Sea countries but Sweden are among the bottom half in the EU when it comes to generating €/kg used. All but Lithuania are among the ten worst in domestic material use/capita. Sweden, Finland and Estonia are among the top five (worst!) in generating non-mineral waste/capita. Estonia and Finland are among top five (worst!) when it comes to generating hazardous waste/capita.

While we all need to focus more on renewable energy and energy efficiency, it is clear that will not be enough. As long as we use all efficiency gains to generate increased income we will not be able to reach the combined goal of social cohesion and reduced resource use. In the event of actually reaching high level of resource material efficiency, we will still run the risk of a rebound effect, making us constantly buy more and more stuff. Even the myth that the post-industrial service society will solve our environmental dilemma have been dis-proven. (That would have to be subject of an article in its own)

Instead of combating unemployment by growth, we should use efficiency gains to reduce working-time. Then we do not need growth and that would also reduce the need for constantly increase in loans and that would in turn also stabilise housing and financial markets. If we become more efficient all of us can go home earlier. Proceeds would therefore also be distributed more fairly, all of us benefit equally of coming home an hour earlier when we are more efficient, not only the rich. Some will always have unregulated working-time though.

We might need some reduced taxes for people with low incomes, so they have a chance to catch up and we can increase capital gains taxes in order to finance it, and additionally make real investments more attractive rather than pure speculation.

In western European countries people are not happier during the last decades despite becoming richer. We see a decoupling of the happiness from wealth already at rather low income for a country. Beyond around 1100€/month it is more about relative economic power, rather than the absolute benefit of being able to eat, dress, transport and live.

It is time to focus on making humans grow as cultural beings and social subjects, rather than just making the economy grow. Going home earlier gives us more time for children, friends, culture, sport, activism and relaxing. That could reduce stress on both us and our planet. Because if our efficiency-gains are used for reduced working-time rather than growth, we can use resource-efficiency gains as absolute reduction in material use rather than just compensating for growth.

Studies have shown that work-time reduction does not for society as a whole have any negative or positive impact on emissions/€ earned, i.e. we will not start flying more and drive more because we have more free time, it is compensated by others having the time to bicycle to work or buying less.

Sweden, Denmark and Finland would be perfectly placed to start reducing working-time. There are many poor countries that are in desperate need of raw-materials and growth, where it actually matters. Where growth means being able to afford clothes, food and a bike, where growth actually satisfies absolute needs. ■

CARL SCHLYTER
Member
Swedish Green Party

Member
Vice President
Committee of Environment
European Parliament

HENRIK NORMANN

# NIB – supporting sustainable growth in the Baltic Sea region

Expert article • 1482

The Nordic Investment Bank (NIB) is an international financial institution in the Baltic Sea Region, with eight member countries; Denmark, Estonia, Finland, Iceland, Latvia, Lithuania, Norway and Sweden. NIB provides long-term complementary financing, based on sound banking principles, to projects that strengthen the competitiveness and enhance the environment. The main part of the financing is targeted on the member countries of the bank as well as on the neighbouring area. Annual commitments in support of investments in the region are on the level of EUR 1.5 - 2 billion. NIB is working mainly in four sectors that contribute to the fulfilment of its environmental and competitiveness mandate: Environment, Energy; Transport, logistics and communications; and Innovation.

Much analysis has been done on the factors that distinguish successful regions from unsuccessful ones. Good governance, efficient administration, a supportive business climate etc. are, as experience shows, determining criteria. Furthermore, there is a need for high-quality infrastructure. This requires substantial investments. At the same time, public sector finances are increasingly tight in many countries. And the new regulatory framework for banks (Basel III) will make it more difficult for the financial sector to provide long-term capital. This creates a need for innovative financial solutions. Different models will be needed, involving international and national financial institutions as well as public authorities. Well-structured public-private partnerships can provide an effective mechanism for mobilizing private sector competence and funding capacity. Effective use of budgetary resources is another area in which partnering with international financial institutions can be useful due to the financial assessment and safeguard procedures they apply.

In the quest for green (or blue) growth we have to ask what the key drivers are for eco-innovation. On the one hand an enabling environment is needed. On the other hand the most effective economic agent, price, has to be set right. And it is essential to keep in mind that policy makers cannot pick winners! Their role should be confined to ensuring a playing field, which fosters innovation and rewards effective solutions. If there is no fertile ground for new business, it will fail, regardless of state intervention. Green growth has to be founded on genuine competitive advantages.

The eco-technology sector is composed of a few relatively large companies and a huge amount of SMEs. The latter can frequently provide innovative solutions but they face the same problem as all SMEs, capital constraints. Technological brilliance is no guarantee for commercial success. One constraint for SMEs is the lack of references. This is aggravated by the limited size of the national markets. If the Baltic Sea Region could agree on common standards, a broader home-market would be created, giving companies from the region a stronger platform for reaching out internationally.

NIB provides financing to small and medium sized enterprises in cooperation with local financial institutions acting as intermediaries. In addition the Bank supports the demand side by financing projects that use modern technology.

Environmental issues are largely of a regional or global nature. As frequently stated, pollution recognizes no political borders. In order to efficiently address such cross-border issues, regional and global cooperation is a must. The Baltic Sea Region has fostered some notable initiatives in this respect and NIB is actively involved in several of these.

NIB for example supports the work of HELCOM to implement the Baltic Sea Action Plan (BSAP). The aim of the plan is to restore the good ecological status of the Baltic marine environment. NIB has set aside EUR 500 million in a special Baltic Sea Environment Financing Facility (BASE) to provide loans for this purpose. Some EUR 330 million have so far been allocated under the facility.

In the energy sector security of supply and environmental sustainability are key challenges in the Baltic Sea Region. The investment needs are large in the coming decades. Enhanced integration of regional energy transmission in electricity and gas is a necessity and substantial long-term investments are needed in interconnectors and distribution systems. NIB is participating in a number of priority projects in this field as well as in renewable energy systems.

Energy investments frequently have long lead periods between decision and generation and the capital amounts large. Uncoordinated activity will cause suboptimal investments. What is needed is a predictable investment climate, including permitting and support schemes. And again, pricing has to be sound in order to support investments and encourage energy saving.

In the transport field volumes will continue to grow. This requires not only improvements of infrastructure. Environmental sustainability of transport solutions has to be ensured, and this requires more effective and intelligent transport systems, including better inter-modality. In addition the right choice of energy bearers and improved energy efficiency is essential.

And we must not forget that we are part of a competitive world. Good internal solutions for logistics and transport are important for competitiveness but we also need to ensure that transport flows to and from the region are effective. The efficiency of transport corridors is determined by the bottlenecks. A concerted effort to remove barriers is needed.

The Baltic Sea Region has many competitive advantages. What is needed is to harness these as instruments for joint regional action! NIB plays its part in providing financial means for this purpose. ■

HENRIK NORMANN
President and CEO
Nordic Investment Bank

ARI KORHONEN

# A crucial time for Europe

Expert article • 1483

Europe has yet to recover from the economic downturn that began in 2008. The economy is currently growing, but at a modest pace. Interest rates are expected to remain low for a significant period of time, and a rapid solution for unemployment is not in sight.

Even though the burst of the United States housing bubble has been perceived as the catalyst for the worldwide economic downturn, the actual reasons for the financial difficulties in Europe are more diverse than this.

In the 2000s, due to the phenomenon of globalisation, production was generated in the joint market area, the labour costs of which were tens of times cheaper than in Europe. We enhanced this development ourselves, by investing in the prerequisites for transport and storage, in order to enable the transport of these consumer goods into Europe in a way that was as inexpensive and fast as possible.

**From supporting the economy to savings**

The solution for the enduring economic downturn could be the stabilising of the markets in the long term. This can be thought of as a slow press of a 'reset' button, which will result in the narrowing of differences within the joint market area and the start of new growth. An increase in the number of consumers with purchasing power is also expected once the middle class currently forming in China and India reaches the market in full force.

The other option is that the economic situation is resolved through a major crisis: the worst case scenario would be war.

Because each of us have the opportunity to impact our future, it is worthwhile to consider the measures that we ourselves can take in order to minimise the negative impacts of the current financial situation.

Only a moment ago the entire western world invested heavily in means to support the economy. Now, with the new focus on cuts in public expenditure and tax increases, the situation is rapidly reaching the opposite extreme. We may predict that one of the routes opted for was wrong. Either the efforts to revive the economy were terminated too soon, or the cuts were initiated too late.

**Does public economy endanger growth?**

At the moment, the state of public economy is a concern that is shared by all European countries. In Finland, the cuts and tax increases are in their early stages. In the near future, difficulties are expected to mount particularly as concerns the finances of Finnish municipalities, as central government transfers to local government constitute the most significant item of expenditure for the Finnish government.

From the perspective of municipalities, cuts in central government transfers to local government will mean a reduction in public investment, but they can also lead to the deterioration of the services provided by welfare society. For a number of years now, Finland has been able to take pride in its achievements in the PISA surveys, the best school-system in the world and top-level experts in almost any field. If Finland now opts to implement savings in the wrong places, the recovery may take decades.

**Confidence in the future must be restored**

Finland and Europe as a whole should turn from pessimism to the building of goal-oriented future visions. Education is the most important of future investments. Our activities are already highly international and networked, and will become even more so in the future. The best experts are invited to create luxury, while others must produce in bulk: this applies to shipbuilding, information technology as well as environmental technology.

Good language skills are necessary for success at the global level. Many European countries should increase their investment in language studies by young people. A good knowledge of English is important, but a strong demand for individuals proficient in Russian is also expected in the not-so distant future. We should not forget that this country of great natural riches is our neighbour and already a highly potential source of partnerships in the field of economic cooperation.

While, at least in the short term, it may not be likely that Finland will produce a 'new Nokia', we possess plenty of strengths that provide the foundation for future success. Finnish expertise remains top-level in several sectors. In Finnish schools, children learn languages and, to an increasing extent, to network via the Internet with individuals and operators in various parts of the world. They possess good basic knowledge in science and history. A wider and better knowledge of Russian should be the goal in Finland, too.

Finland is also a very safe country. Finland can offer a potential location for a number of companies, as well as guaranteed profit for investors. For example in the Turku region, existing business parks for companies offering new jobs to begin, transfer or expand their operations to can be found in Turku, Raisio, Lieto, Kaarina and many other towns. The region also offers skilled workforce and high-level research and education.

A critical time is upon us. We must be courageous and invest in the future: children, young people, expertise and investments. The downturn can be beaten, and success in this will mean an increase in well-being on the global level. ■

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Mayor
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Member
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ANITA LEHIKOINEN

# Strong internationalization safeguards quality of higher education

Expert article • 1484

The international operating environment of the higher education institutions is changing rapidly. Demographic changes, international competition for talent, globalizing labor market and changes in knowledge production effect on higher education institutions worldwide. With globalization, the world is developing into an increasingly comprehensive system. Rapid increase of higher education crossing national borders, integration of the higher education systems and increased variety in the forms of higher education are among the great changes that we have experienced in the field of higher education globally. Internationality has become crucial to all business activities as well as to the field of education.

The benefits of internationalism in higher education can be examined from the perspectives of students, teachers, researchers, higher education institutions, as well of the individual countries. Mental and financial resources of a single country are always limited. It is obvious that a significant part of the knowledge and information needed is produced internationally. Global challenges require global solutions and global problem solving require international cooperation. Students need an education that allows them network internationally and to find employment in an international setting. As mentioned above there are several reasons why internationalization of the higher education is needed and why quality enhancement in research and education require international contacts and receptivity. It can be stated that international cooperation is the best way to improve the quality of the higher education.

No wonder that internationalization has long been among the key aims of the Finnish science and higher education policy as well as at the core of higher education institutions' own strategies. Promoting high quality mobility of students, early stage researchers, teachers and other staff in higher education has also been a central objective of the Pan European Bologna Process from the very beginning.

Finnish higher education institutions have become more international. Almost one half of Finnish publications in 2008–2010 were produced in cooperation with foreign research organizations. The number of foreign degree students at the higher education institutions has gone up. The universities have been more active in recruiting researchers from abroad. Regardless of this positive development, the drive to internationalize remains weaker and the networks less robust in Finland than in other advanced science countries. The level of both domestic and international mobility of scientists remains low in various stages of a researcher's career. While a great interest is shown towards the Finnish education system, our higher education institutions are not sufficiently well known internationally.

Higher education has been one of the fastest-growing sectors in the world. A higher education degree today also is the most common cross-border education product. The majority of the value of global trade in educational services comprises sales of higher education leading to a degree. The growth in the volume of higher education and international mobility of students has followed the trends in world trade. Where there is increased wellbeing, there is more demand for education and student mobility. According to OECD and UNESCO figures, some 4.1 million higher education students studied in education leading to a degree outside their own countries in 2011.

In the 2000s, our high-quality education system has become a key part of the Finnish identity and Finland's positive image abroad. However, we have failed to fully exploit these strengths and our competitive potential. The interest shown towards Finland is a great opportunity. It will open up new possibilities for cooperation and networking, which are a must for improving the quality of education and research. Finnish companies and educational organizations have an opportunity of turning educational expertise into significant business. Quality management and verified and proven quality play a key role in developing education exports. However, it is important to realize that education export business is not a must for everybody. There are other areas of internationalization in which educational institutions can invest. Education exports must be a clear strategic choice that supports the institution's other goals.

In the near future higher education institutions might increasingly move towards international alliances. Alliances would bring many benefits for education exports: for example, they would enable a global presence in the market, efficient resource use and a sharing of risks, in addition to boosting quality and value added provided for the customer. It must be made possible for Finnish higher education institutions to take part in such alliances – also in form of joint international degree programs. This kind of development will benefit Finnish society at large. ■

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ILPO KOKKILA

# Paving the way for more business with Russia

Expert article • 1485

In the first months of 2014 the poor economic performance in the EU and Russia and the situation in Ukraine have discouraged deepening economic cooperation with Russia. This is unfortunate for the business, which sees great potential in cross-border trade and investment. Politics should not jeopardise business, which plays a key role in providing welfare for the people on both sides of the border.

In many respects Russia is the most significant country for Finnish companies. In 2013 it was number one measured by trade turnover, by value of imports, by number of foreign tourists visiting Finland and by the value of transit transportation. It has become one of the major destinations for foreign direct investment from Finland and investments from Russia to Finland have been on rise as well.

In exports Russia was one of the three biggest countries alongside with Sweden and Germany. In addition to exports from Finland to Russia Finnish companies increasingly supply their products to the Russian market from their manufacturing facilities located in third countries and from their subsidiaries established in Russia.

Though the business as a whole has developed positively, it could be better. Finland's slice of the untapped EU-Russia business potential is huge. For Finland having over 1,300 km common EU border with Russia this potential is a great opportunity. The low economic growth in the EU and Russia should encourage both parties to actively strengthen the prerequisites for mutually profitable business.

**Faster economic integration**

Russia's membership in the WTO is of great importance, as it made Russia part of the global market operating under WTO rules and regulations. Russia has made some interpretations of its WTO commitments, which have hurt foreign companies, but the big picture is positive. Russia's accession to the OECD will also be of great value for business as it brings Russia into the framework of the OECD standards.

Russia's membership in the global market economy structures should, however, be only a milestone in deepening EU-Russia economic integration. The long-awaited move is the conclusion of the negotiations on the New EU-Russia Agreement in order to replace the partially outdated EU-Russia Partnership and Cooperation Agreement. Actually this "should have taken place yesterday", like the Russian expression so well describes the will of the European and Russian business communities.

The New Agreement should not be the end of the process. Leading EU and Russian business organisations (BUSINESSEUROPE and the Russian Union of Industrialists and Entrepreneurs RSPP) prepared already in 2008 joint proposals for a new EU-Russia Trade and Investment Agreement, which covers practically all aspects of a comprehensive free trade agreement. To a great regret for the business communities, the launch of the negotiations on an EU-Russia free trade agreement seems today more distant than in 2008.

All industries and especially tourism would greatly benefit from transition to visa-free travel between the EU and Russia. Discussion on this issue has suffered from common misunderstandings related to its consequences. Visa-free travel does not mean that Russia becomes a Schengen country nor that border control including checking of passports would be abolished.

**Infrastructure to support cross-border business**

Finnish companies enjoy the benefits of the favorable geographical location, similar rail track gauge, long experience and good reputation in business with Russia. All this and the stability of the Finnish business environment have made Finland also a gateway to Russia for third country companies.

In order to benefit from the geographical location Finland and Russia continuously invest in infrastructure to meet the requirements of the future growth of freight and passenger transport by road, rail, sea and air. Projects like the Northern Growth Corridor Oslo-Stockholm-Turku-Helsinki-Kotka-St. Petersburg are important not only for Finnish business and tourism, but they serve as an important link for EU-Russia business and tourism as well.

Introduction of the Allegro express train between Helsinki and St. Petersburg is an excellent example of how investment in modernization of the track and trains can multiply number of passengers in a few years. The cut of time and the supply of modern onboard services designed for business travelers and tourists have beaten all expectations. Similar effect is expected for travelers by car, when the last missing parts of the motorway connection between Helsinki and St. Petersburg will be finalized. Equally important is to increase the capacity of border-crossing for freight and passengers to avoid recurrence of long queues, which were too common just a few years ago.

Ultimately it all comes down to ensuring competitiveness of the companies on both sides of the border. Only that can enable our companies to thrive, increase economic welfare and make all the rest possible. ■

ILPO KOKKILA
Chairman of the Board
Confederation of Finnish Industries EK
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ALEXANDER Y. PANYCHEV

# High speed rail lines as a factor of development of science, innovative technologies and education

Expert article • 1486

Russian Federation is located on the junction of large-scale and intensively developing geo-economical areas - European, Pacific, South-Asian and North-American. This fact creates the possibility of its positioning as a transit area. However, the existing transit potential of Russia is used not enough: the transit transportations volume amounts less than half of possible. One of the main solutions for this problem is the development of High-speed transport. The projects and principles mentioned in this article will certainly involve the economics and logistics of North-West Region of Russia and Baltic Countries that are forming the transit junction for transcontinental cargo transportations in Asia-Russia-EU direction.

The decisions taken by the Russian Government and declared by the President V. Putin with respect to three major investment projects in the transport field (the high-speed rail line Moscow – Kazan; the central ring motorway; Trans-Siberian and Baykal-Amur mainline railways), definitely, involve the participation of industry-specific higher education institutions.

The projects to overcome the existing bottlenecks and infrastructure limitations are long overdue, and the construction of a high-speed rail line is a revolutionary step in the railway network development and also the first attempt in Russia's recent history to provide a long-term solution. The Transport Strategy of the Russian Federation up to 2030 provides for the construction of over four thousand kilometers of high-speed rail lines to connect Russia's large cities. The high-speed rail line Moscow – Kazan is to be not only a pilot section of the route connecting the Central district, the Volga Region and the Ural economic district with a total length of 770 km, it will also be noted for unique solutions and implemented technologies, having no counterparts anywhere in the world.

The construction of high-speed rail lines is a large national project that will boost the country's social and economic development and it involves not only the creation of innovative technologies and their adaptation to Russian conditions, and the construction of unique technology centers, but also the development of new knowledge and services intended for a fundamentally new passenger type.

The construction of high-speed rail lines will:

- unclog the existing transport infrastructure, enhance the capacity of railways that will be cleared from passenger trains and will be capable of serving more cargo and suburban trains;
- enhance the territorial cohesion and integrity in Russia, as well as mobility of the population;
- stimulate economic activity and development of labor migration;
- reduce the load on air and road transport;
- enable to streamline the cargo flows as well as flows of investments in the infrastructure development;
- enhance the mobility of human capital assets.

Effect of the construction of high-speed railways:

- engagement of construction and production companies;
- development of the machine building complex;
- reduced environmental emissions;
- creating jobs;
- increase in the population income;
- reduction of prices for real estate in large cities along the railway;
- development of small- and mid-size business;
- localization of knowledge and innovative technologies;
- recovery of human resources and training of scientific and engineering staff;
- development of the education and science.

The high-speed railway project is to stimulate:

- the development and implementation of new educational programs;
- increase in the quality of education;
- increase in the educational services' share of export;
- the implementation of new approaches to, and technologies of, passenger traffic management to recover the rail transport share in the total volume of passenger traffic and to occupy an efficient transport niche;
- the creation of international scientific and educational centers;
- increase in the competitiveness of human capital assets.

One of the most important issues to be addressed during the implementation of the Russia's first project for construction of a high-speed railway is staff training and advanced training.
The development of high-speed rail transport in Russia is comparable to the electrification of railways or diesel traction introduction during 1930-50s in its effect on the industry.

And such approach has been typical of the transport industry since its origin. And the system of transport education established in 1809, almost simultaneously with the industry itself, is serving the interests of the state, providing human resources and scientific support for the solution of federal-level tasks related to the development of transport infrastructure, as well as efficiency, safety and environmental friendliness of the transportation process.

The basic principle of education in the field of transport used to consist in that along with in-depth theoretical knowledge, the students also received first-hand information on advanced areas of the transport industry development, which formed the basis of the so called "quality of education".

It may be claimed now that despite the obvious losses resulted from the years of educational "reforms", not only the diversified network of institutions has been preserved but also fundamental values of the industry-specific education.

It is however still unclear, what is principal ordering party for training the specialists in high-speed railways. For in the project VSM 2 Moscow-Yekaterinburg alone the total demand for specialists of various education levels is about 8,500 people.

The construction and reliable operation of highly-efficient, technically safe and environmental friendly equipment requires the availability of specialists who have received in-depth education in designing, construction and contemporary production technologies based on fundamental training and taking due account of the international experience.

And it means years of education, which includes the necessity of training the instructors, organization of work placement and apprenticeship abroad, because many of the high-speed railway facilities are not yet available in Russia.

Consolidating the efforts of all of the interested parties (JSC Russian Railways, JSC High-Speed Rail Lines, Scientific & Research Institutes, and Government authorities) is the only way of prompt implementation of the unique program for staff training, which will enable to address new challenges related to the high-speed railway project.

To this end, it is necessary to:

1. Secure the demand for the training of employees, specialists in different areas. Define the ordering party (parties), target figures related to the nomenclature of future jobs.
2. Develop professional standards in which JSC Russian Railways is to play a leading part.

The implementation of such standards can be based on the existing experience and must involve advanced training, retraining and work placement for the academic teaching staff.

After such documents have been developed, it will be possible to proceed with the selection of training paths (routes).
3. Define sources of financing, training programs and procedures for selection of the principal contractor and its partners.

It is the only way to make the high-speed railway project, along with the universities, a driver of the development of regions, industries, economy, society and the state. For if today we cope with the task of localization of not only technologies but also knowledge, then we will have secured the stable leadership of Russia as a high-speed power. ■

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MIKA JOUKIO

# Metsä Tissue seeking for strong growth in Poland

Expert article • 1487

Metsä Tissue, part of Metsä Group, is one of the biggest players in the European tissue market. With its 11 mills in six countries, Metsä Tissue operates close to its customers and offers them the full assortment of Lambi, Serla, Mola and Tento consumer branded products as well as Katrin products and solutions for professional use. Also SAGA baking and cooking papers are being produced for home and professional kitchens.

In 1997, Metsä Tissue took a strong foothold in the Polish tissue market by acquiring the first local operator and starting to extend operations. Poland, the sixth largest economy in Europe with nearly 40 million inhabitants, a developing economy and a retail market that is currently being restructured, is a strategically important market for Metsä Tissue, whose vision is to be the best partner for growth.

**Global trends and economic growth increase tissue consumption**

The forest industry is often seen as a sunset business, but for Metsä Tissue the opposite is true. Global trends, such as urbanisation, ageing population and a rising interest in personal hygiene and wellbeing are increasing the demand for our products.

Global tissue consumption is increasing. Between 1994 and 2013 it has doubled from 15 to over 30 million tonnes per year. In European countries, the annual consumption today ranges from 2 to 18 kg per person.

Tissue consumption strongly relates to higher level societal indicators: Gross Domestic Product (GDP) and the life expectancy in years. The use of tissue is part of societal and economic wellbeing, improved life quality and hygiene conditions.

In countries with a lower GDP, tissue consumption is mainly toilet tissue. In line with a rising GDP, hygienic household towels are replacing traditional cotton towels in kitchens, while in developed economies, a wider assortment of tissue products, including handkerchiefs, facial tissues and napkins, is being used.

Poland is a middle-stage, developing tissue market with the current annual consumption of nearly 8 kg per person. In 2013, the market grew by nearly 5 per cent. The growth potential is significant both in consumer and away-from-home categories, while the Western and Northern European markets are more mature with higher volumes.

**Developing economy and restructuring retail market**

The economic growth in Poland during the last decades has accelerated the restructuring of the retail market. Today, the top five players capture around 25 per cent of the grocery retail markets in Poland - some two decades ago the market was still fragmented with mainly private, local stores. The direction is clear: the focus on retail is turning towards supermarket chains and discounters that are opening up channels to reach larger groups of customers more effectively.

At the same time, these factors are tightening cost, price and quality competition. New players are challenging established operators with the latest technology and tough price competition in order to penetrate and position themselves in the developing markets.

To ensure competitiveness, tissue as a light-weight commodity, needs to be produced close to customers and delivered efficiently to the end-users. In Poland, Metsä Tissue focuses on operating in close collaboration with the growing retailers with adequately large volumes. We support our customers' growth by providing them with attractive offerings, while operating in a cost-efficient manner from sourcing to supply.

Mola, one of the most well-known consumer brands in Poland, is one of our strengths on the market. A strong brand attracts existing and new consumers to try out novelties and adapt to new ways of using tissue. A decade ago, the Mola brand assortment mainly consisted of toilet and household tissue; today, it encompasses the whole assortment including facial tissues and handkerchiefs.

Consumers' tissue preferences are local. While the Nordic countries appreciate whiteness, softness and share an interest in sustainability with the Western European markets, Central Eastern European markets prefer pastel and bright colours, fragrances and patterns.

For Metsä Tissue, sustainability is a key competence. In Poland, Metsä Tissue enhances sustainability proactively and expects interest in it to grow during the coming years.

**The modern tissue mill in southern Poland serves domestic and near-by markets**

The large investment programme to renew Metsä Tissue's mill in Krapkowice in southern Poland was finalized in 2013. The two new, highly energy-efficient tissue paper machines as well as the new converting lines and modern logistics facilities make it the most modern tissue paper mill in Europe. Having both the EU Flower and the Nordic Swan ecolabels on its products demonstrate its environmentally sound performance.

Due to its favourable location, the Krapkowice mill can serve both the Polish as well as the German tissue market. ■

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MIKKO SÖDERLUND

# Finnish real estate investment vehicles in St. Petersburg

Expert article • 1488

The scope of this article is limited to investments made with the help of an investment vehicle, e.g. a fund or having a strategy of long-term ownership. Direct sales of flats to end-users and main contracting are excluded.

The first Finnish real estate funds aiming at investing in Russia were created in 2006 and 2007. It takes up to two years from the initial idea before the fund is ready and functioning after all the investor negotiations and creating the legal scheme. Therefore, we can assume that the first ideas and plans appeared in 2004 – 2005.

That was the time of rapid and stable growth in Russia. The financial crisis of 1998 was already well forgotten. The image of Russia as an investment target had improved significantly. Even conservative and cautious pension funds were ready to invest into real estate in Russia, not directly but through investments vehicles denominated in euro and governed by the Finnish law and managed by a Finnish fund manager.

In summer 2006 Evli Bank`s EPI (Evli Property Investments) and Catella Property (later Amplion Asset Management) launched the EPI Russia I Fund with pension funds Varma and KEVA as anchor investors. The Fund acquired three properties (two office buildings and a logistics centre) in the St. Petersburg area with the total investment value of approximately 250 million €.

Evli Bank planned to launch the EPI Russia II Fund in 2008 which was not executed. In 2011 Amplion exited the EPI Russia I Fund and Evli Bank took over. Later the same year EPI and Danish BPT were merged. The Fund still holds the three properties which have been on sale but no deals have been made.

Sponda opened its office in St. Petersburg in early 2007 and in Moscow the next year. In the end of 2007 it already owned as direct investments three office buildings, one logistics centre and two land areas in Russia. During the next years Sponda made more acquisitions and also divestments. In the end of 2013 the value of Sponda`s portfolio in Russia was 247.8 million € consisting of eight properties and having the focus in Moscow. In 2013 Sponda made a portfolio investment worth appr. 50 million € into Russia Invest Fund initiated by SRV Group. The same year Sponda announced exiting Russia with direct investments during the next 3 – 5 years.

In 2007 Icecapital formed the Icecapital Saint Petersburg Residential Fund I worth 45 million € with pension funds Varma, Etera and Suomi as the investors. Later the same year the Fund acquired from a local construction company 276 flats which were ready and constructed in 2009. The flats were then rented out to the local market. In 2011 there was a scandal in the press according to which some of the flats were used for prostitution. Soon after that the Fund decided to sell the flats and exit the investment.

In 2008 a second rental flat operator and investor, Sato, entered the St. Petersburg market. In the end of 2013 they launched their 9th property bringing the total amount of apartments to 237. Currently they have three more properties under construction with 219 more flats in the pipeline. They have more than 150 million € of committed investments in St. Petersburg.

The global financial crisis created a slight pause in the appearance of new real estate funds focusing on Russia. In the autumn of 2011 SRV Group, Sponda, pension funds Ilmarinen and Etera, and Onvest created a fund named Russia Invest. The total equity commitment from all investors is 95.5 million € enabling the Fund to invest up till 300 million € by using additional bank financing. The Fund made its first investment decision in the summer of 2013 when buying a 55% stake in SRV Group`s shopping mall project in St. Petersburg. The construction of the property started in the autumn of the same year and will be completed in the spring 2016.

The biggest challenge to foreign funds in Russia is currency fluctuations. The investments are made in euros but the income from properties is partly or fully in roubles. The market saw the weakening of the rouble after 2008 and now again in early 2013.

Even denominating the lease agreements in euros eventually does not secure the investor`s currency position. The tenants mainly live in the rouble economy and in the end calculate their costs in roubles. There always can be found a competing property close by which has lease rates in roubles.

Real estate investments require long-term vision and strategy. In the Russian volatile economy crises come every 5 – 10 years depending on external and internal factors. The drop is as sudden and fast as is the upward movement. ■

The author has lived and worked in St. Petersburg, Russia, permanently already for 20 years since 1994.

MIKKO SÖDERLUND
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ALEKSEI NOVITSKY

# GEK Insights – Natural Gas Outlook 2014

Expert article • 1489

**Price correction is on the horizon**

Regional dynamics continue to hold sway with variations in terms of how gas is priced; the economic correlation between supply and demand for gas is already reflected in domestic prices at US regional hubs and the futures market. In Europe, an increasing amount of gas sold is priced as gas on gas while traditional oil-linked LTC protocols has fallen to 50 percent owing to weak demand, inflexibility of take or pay contractual obligations and the possibility of LNG volumes for European gas suppliers. Pricing in Asian markets is still trending towards oil indexation, mostly as a security of supply premium for major consumers in a high demand, tight supply market.

**Finances determine project engineering**

Investment in infrastructure is central to bringing new reserves of gas online which in turn facilitates an upswing in demand and further market penetration. The majority of investment will be centered in the upstream for new greenfield projects and to replace volumes lost due to decline in existing reserves. This having been said, it is far from certain that such capital outlay will be fulfilled. Structural uncertainties including shifts in operational areas like pricing mechanisms, contract terms, and production costs or macro issues including economic recession, regulatory and legislative policies threaten the financing necessary to develop large upstream and transportation projects.

**Creating new market demand**

In N. America, gas production is expected to increase exponentially with US production totaling 840bcm by 2035. While US domestic demand is expected to increase, the volumes to be produced will provide and ample basis for LNG exports to global markets.

In Europe, Norway's upstream portfolio is anticipated to sustain production at current levels, but will lack the capacity to overcome declines in N. Sea and Dutch brownfields. European unconventional production will be modest at best owing to regulatory structures, environmental concerns and the geological nature of the plays themselves.

In the Asian-pacific, levels of Australian production will depend ultimately on upcoming projects' cost structure, deployment of less costly technological solutions and competition from US suppliers. China's unconventional production development bears watching.

Russia's production augmented with new supplies under development from Yamal and E. Siberia will hinge on demand from its pipeline customers in Europe along with Gazprom's ability to gain market share in China and other major Asian markets. However, overall production costs, logistical complexity, regulatory inertia, and reliance on LTC pricing for its supplies will dilute greatly any price advantage Russian producers will have versus emerging competitors in strategic markets.

**Winning the battle for hearts and minds**

While global gas consumption continues to grow apace, there are marked variations by region with European markets facing a particularly difficult future. Such regional disparities are spurred on by inter-fuel competition and specific economic & policy conditions.

N. America has abundant supplies of cheap gas, gaining market share at the expense of coal in the power markets with an eye towards further penetration in the industrial (petrochemicals) and transportation (long haul on-land and maritime fleets). In Asia, gas consumption continues to grow owing to on-going nuclear shutdown in Japan and gas' growing exposure in the Chinese energy market, now the third largest globally. By contrast, European consumption has declined by 2% in 2012, much of the contraction attributed to the sluggish economy along with growing supplies of renewables and cheap coal (aided by depressed CO2 prices).

The power sector is seen as the sector offering the most potential for demand growth for gas in North America, while in Europe the picture is more downcast, with demand only expected to recovery slowly to 2010 levels in 2025. Demand is currently constrained in industrial and transportation sectors globally. However, with the introduction of increased volumes of LNG available on the world market, feed stock replacement is expected in the petrochemicals industry, long haul land transportation and the maritime sectors owing to gas' anticipated price advantages and environmental credentials over relevant alternatives petrol & diesel, HFO, LPG, and coal.

**Change of Management Style**

Finally, energy customers are becoming increasingly result orientated. Hence a sustained "single-minded focus" on historical core business activities will sacrifice market share and limit future competitiveness. Instead, emphasizing natural market advantages and diversifying business activities to suit are crucial to securing future revenue and growth. ■



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# Distributed generation in Russia – menace or opportunity?

Expert article • 1490

Over the last 5 years summary value of distributed generation equipment imported to Russia has grown more than fourfold - from USD 150 to almost 700 million. So shows analysis of customs data performed by the Energy Center of Skolkovo business school and the Energy Consumers Association.

Spiking growth of distributed generation is, on one hand, industry's logical answer to increasing inefficiency of the unified energy system, ever more expensive and impractical. On the other, it reflects a tendency towards more effective use of associated and secondary energy resources (associated petroleum gas, coal methane, blast-furnace and converter gas) at industrial facilities. It is true that utilizing associated or secondary resources is only tangentially related to distributed generation. Generating facilities in this case are built not so much to provide energy as to improve energy efficiency and environmental standards of core operation.

To government regulators distributed generation is a menace to the unified energy system rather than an opportunity. In the Minister of Energy's report on the energy sector's performance in 2013 and mid-term objectives growth of distributed (local) generation is called one of the main problems of the industry, along with cross-subsidies and payment defaults. The regulators want to set up barriers against it and so continue putting on the market authoritarian devices: limit on installed capacity for the retail market at 25 MW, licensing for stand-alone plants outside the wholesale market, restricted access to gas and power grids, fuel maximums. Like Myanmar women's necks that won't hold up on their own because of so many rings on them, the Russian market is out of shape.

Meanwhile, in developed countries regulators support distributed generation, because, working with national unified systems, it can improve overall stability and add flexibility in responding to consumption peaks. For instance, in Germany energy producers with installed capacity of up to 100 MW are considered local generators, and they don't have to go through complicated registration just to sell energy on the wholesale market.

Setting up barriers to local generation with one hand, Russian regulators with the other throw in more reasons to switch to local generation and leave the unified system. Last year they introduced a capacity delivery agreement to support renewable energy sources with RUB 82 billion of piggybacked costs to the market by 2018. They also decided to give a "provisional" status to practically all stations that had failed competitive capacity outtake. As a result, consumers this year will pay some RUB 25 billion in costs of ineffective generation. In the beginning of 2014 they drafted a resolution to require payment for reserved maximum capacity. If it is approved, the industry may have to pay at least 20% more for energy delivery.

All this considered, we think the crossroads for distributed generation is one-two years away. Within that time it will become clear whether stand-alone, insular generation will continue to grow while the unified system might collapse, or we reach a new technical model for the energy system, where large and small stations work for synergy.

The government needn't implement any complicated measures to avoid the scenario where the unified system falls apart. All it needs to do is to establish parameters for technical connections, rules for technical functioning of local generating plants to work alongside the unified system. Everything else - intellectual management and so on - the market will take care of. No special subsidies or preferences from the top are required - investors bring money to these projects without CDAs.

But, considering that the government is writing greater investments for the unified system, possible new CDAs into the draft of the Russian Energy Strategy 2035, it looks like distributed generation will have more incentives to develop - to the worst possible detriment of the unified system. ■

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# Paulig – promoting the role of coffee in the Baltic Sea region

Expert article • 1491

In the Baltic Sea region, coffee culture varies a great deal between countries. Coffee has a long history of ups and downs; for example, in Finland it has been banned and rationed. It seems to have made coffee even more desirable for Finns, who are the biggest coffee consumers in the world per capita with yearly consumption of 12 kilograms of green coffee. This is over three times more than in the two other Baltic rim countries, Estonia and Lithuania. Latvians drink less than 3 kilograms of coffee a year and Russians consumer 1.6 kilograms per capita. More and more consumers around the Baltic Sea area are enjoying coffee, even though Russians were relatively slow to catch onto this trend. Due to the difficulty of getting good coffee in the Soviet era and also due to the strong tea culture, the trend was slow.

**Paulig was among the first foreign companies in independent Estonia**

Paulig was the first foreign company to make an investment in Estonia immediately after national independence, and Paulig's coffee and flavourings plant was opened in Saue in the middle of 1993. Paulig had a sales office in Estonia before World War II but the office was "temporarily" closed for 50 years. During the last 20 years, Paulig has been creating a coffee culture in the Baltic countries by selling high-quality coffee for retail and horeca customers. Educating baristas and training coffee shops to prepare high-quality natural coffee have been important for the development of the coffee culture. Today, Paulig is the market leader for coffee in Estonia and Lithuania and second in Latvia. We aim to grow further and strengthen our position on these markets also as a full-service provider, supplying not only quality coffee but also coffee machines, service and maintenance, and other coffee supplies to offices and horeca customers.

**Russia offers the biggest opportunity for further growth**

Paulig has operated in Russia over 20 years, first via distributors, then through its own company as an importer, and since 2011 as a local producer. Paulig's roastery is in Tver, and coffee is sold in Russia as well as Ukraine, Belarus, Kazakhstan, Moldova and Azerbaijan.

The coffee market is growing rapidly in Russia, almost 5% a year. Especially natural coffee will be the driver for further growth of the Russian coffee market, and Paulig is concentrating on this segment. Due to gentrification in Russia, coffee is seen as a modern, present-day product and it is used for its good taste and stimulating effect. Cafés and high-quality natural coffee also fit well in today's urban lifestyle, and for consumers, it is a way to emphasise their personal image. Hence, the market is growing and will continue to grow, and this fact is the basis of Paulig's strategy in Russia.

One of our strengths is our local coffee roastery as Paulig wants to be near its customers and consumers. Investment in Russia was also justified by savings on logistics and custom duties. The factory was built in Tver due to its central location, favourable atmosphere to investment, and reasonable land prices. Finding an educated labour force was expected to be easy and this proved to be true. Today, the Tver roastery is a modern production plant with international food safety and quality certification like ISO 22 000, as well as McDonald's Food Safety and Quality and Supplier Workplace Accountability certificates, which are highly recognised within food industry.

**Diverse consumption habits and consumer needs**

Busy lifestyles lead consumers to solutions that are fast and easy, such as capsule coffee machines or ready-to-drink and take-away coffee products. New flavours and brands are sought also within coffee and the ability to try new brewing methods is increasing. Coffee is like wine, with different flavour variations and nuances.

Understanding consumers' habits and expectations is the key to developing the coffee culture. Paulig listens to consumers in all its markets through market research and consumer dialogue. In Finland, coffee belongs to all occasions, daily routines as well as celebrations. Each day, coffee has a big role and its stimulating effect is also important. In this respect, Estonia is quite similar to Finland. In Latvia and Lithuania, the coffee culture is more like in Central Europe. In Russia, coffee drinking habits are still evolving; coffee is seen as a luxury and many emotional needs can be connected to coffee. Consequently, it could be said that in Finland coffee is more like bread and in Russia like chocolate. ■

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PEKKA HEIKONEN

# Baltic welding companies to reach competitiveness through automation

Expert article • 1492

Welding companies and steel fabrication workshops at Baltic region meet severe competition in the market when it comes to pricing. The only way to survive and develop the production in Europe, Baltic region and in Russia is to operate with a latest-technology welding and production automation to reach competitiveness against low cost countries.

To get the most of the factory's productivity, Pemamek has developed welding automation systems further by using hi-tech vision-based welding automation. Company Pemamek has designed and developed a range of moduled automation systems with extra features to bring steel fabrication more competitiveness and productivity.

Each PEMA welding station is designed and built to boost the competitiveness of customers' steel production. Not only the production volumes increases, but also the quality improves, when production line deliveries are tailored and tuned to meet all requirements of a specific company. The tailored delivery consists of the entire process from project definition to all the way from basic design to commissioning.

PEMA's close co-operation with different industries and partners all over the world has enabled the development of products and their delivery reliability to reach world-class levels.

**Unique deliveries**

One of PEMAMEK's unique deliveries to Baltic region was to Estonian AS E-Profil. E-Profil manufactures anchor handling winch and crane components for the offshore industry. The company decided to automate its manual welding process and switch to submerged arc welding. In future, the work will be done by a PEMA 5 x 5 MD special welding column & boom equipped with a set of Lincoln Electric PowerWave AC/ DC 1000 A SD submerged arc welding equipment, and four PEMA APS 3500 Skymaster positioners.

Another remarkable PEMA delivery was a greenfield project to Estanc in Tallinn, Estonia. The company had decided to invest on modern equipment to compete on the market in Nordic countries and offshore industry. After the completion of the factory project, the productivity of the company increased by 30 % compared to previous production. Estanc's mission is to provide customers with professional solutions for storage and distribution systems of industrial liquids and gases. Their core business is serial or project-oriented manufacturing of process and pressure vessels and fuel storage tanks. Materials used are carbon and stainless steel and special steels for pressure equipment.

Pemamek has also added with modern production equipment many companies in Russia, Poland, Finland, Sweden and Norway, just to mention countries around Baltic Sea.

**PEMA Vision System for robotized welding**

The **VRP-V Vision Robot Welding System** is a patented method and can be used in the welding of sub-assembly ship sections or e.g. stiffeners of large flat panels. The conventional off-line programming of robots is replaced in the system by a vision system that identifies the required work piece using a high-resolution digital camera.

The **welding robot system** is a track-mounted travelling welding gantry. The horizontal motion track of both the welding robot and the high-resolution camera are mounted on the gantry's horizontal beam. The system's control panel is also mounted on the gantry. The system is programmed with the aid of a Machine Vision system designed by Pemamek. The operation of the equipment is automatic, but manual operation can also be selected using the robot's remote control.

**Remarkable increase in productivity**

The first robot gantry of its kind has been operational since summer 2002 operational nowadays at STX Finland Shipyard and the results have been substantial: During the first years in operation the robot has welded with an arc time ratio over 80 % and with an utility ratio close to 100 %, both figures, which are extremely good for welding robot installation. The equipment has been also operational in an unmanned work shift. Additionally, STX Finland shipyard has since purchased several different Vision-Based welding systems from Pemamek.

Pemamek is the world leading company in designing and manufacturing production and welding automation solutions and work piece handling equipment on the brand name "PEMA". This year Pemamek was granted an award of "Company of the year in welding automation" by American business research company Frost & Sullivan. Pemamek uses and produces hi-tech: utilising the best available robot and automation technology. PEMA systems and comprehensive customer support services are specifically engineered for the heavy engineering, mobile machinery, civil construction, shipbuilding and offshore, industrial boiler, wind energy, and process and nuclear industries. Now, PEMA products and services are used in more than 50 countries around the world. Main business areas are Russia and CIS, Americas, Central Europe, and China. ■

More information can be obtained from www.pemamek.com

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# Building a Nordic hub for leadership and organizational development

Expert article • 1493

There may be room for a Nordic champion in leadership and organizational development. At least, Aalto University Executive Education is striving to test this hypothesis. The company has moved forward decisively since 2011, despite the gloomy economy in all the main markets.

**Finding the recipe for becoming global**

Aalto University Executive Education (Aalto EE) has a long history in offering executive education programs and related advisory services. Its main target groups are senior and middle managers in large private and public organizations, as well as future leadership talents.

The company taps into the unique strengths of its parent university: entrepreneurship and venturing, innovation management, design management and technology-enabled management innovations. Over the last few years, the multidisciplinary Aalto setting has been a powerful lever for Aalto EE's growth and expansion.

Aalto EE has been present in the Asian market for 19 years. In fact, it has more Executive MBA alumni in Asia than in Europe or its native Finland. In addition to Finland and Singapore, Aalto EE operates in the Baltics, China Indonesia, Poland, Russia, Sweden, South Korea and Taiwan. Operations in Iran will be launched by autumn 2014. Already, Aalto EE is one of the most international leadership development organizations affiliated to a university in the world. The headquarters in Helsinki coordinates operations in Europe and South Korea, and the permanent office in Singapore serves as a hub for the Asia Pacific region.

Aalto EE's size provides economies of scale, especially in developing and managing the Executive MBA (Master of Business Administration) programs. Both the students and the faculty are encouraged to make the most of the exchange opportunities. In regard to organization-specific customized programs, the strong international presence helps to better serve increasingly global corporations. Due to the coverage, solutions can be delivered globally depending on the partners' needs. For many large corporations, building a uniform leadership culture is a contemporary challenge.

When pursuing international growth, Aalto EE seldom launches a green field operation but prefers partnering with a prominent local institution, ideally the leading multidisciplinary university. The partnerships vary across markets; some of them are mere service agreements, whereas others are true joint ventures where both profit and risk are shared.

**The appeal of the Nordic Way**

Most of the globally renowned executive education institutions are located in the US, UK, France or Switzerland. Aalto EE is a rare Nordic example. The continuing success of the Finnish education system in the international comparisons has made the northern approach globally appealing. Not surprisingly, Aalto EE promotes equal opportunities, e.g. by paying attention to a balanced gender distribution in its programs.

As a member of the Aalto University community, Aalto EE enjoys the 'Triple Crown' of accreditations (AACSB, AMBA and EQUIS), the three most respected business school accreditations, awarded to only 0.4% of the world's business schools.

The diverse international network with organizations such as Unicon, (the International University Consortium for Executive Education), EFMD (the European Foundation for Management Development) and PIM (Program in International Management) helps Aalto EE to keep up to date on the latest phenomena and trends. Aalto University School of Business is also a member of CEMS (the Global Alliance in Management Education), a network linking the leading European universities and major corporations.

**Understanding the shifting market**

Aalto EE aims for continuous profitable growth and strives to become a most preferred partner in executive education and organizational development for the major international companies in Northern Europe and East and South East Asia.

Since 2009, the executive education market has become increasingly turbulent, and some of the struggling industry players have initiated a race to the bottom through unsustainable price competition. Nonetheless, there is an increasing demand for agile and holistic solutions where the traditional boundary between training and consulting becomes blurred. Furthermore, an increasing number of programs have tangible objectives and pre-set key performance indicators. Today, customers expect higher levels of flexibility and adaptation as their conditions may change to an extent where the original program design becomes obsolete.

Despite the gloomy market, Aalto EE's turnover has increased from EUR 8.8 million (2010) to EUR 13 million (2013). While investing in renewing its infrastructure, the company has been able to post strong positive annual profits. In 2013, Aalto EE's financial footprint and overall impact within the Aalto University community accounted for approximately EUR 1.7 million.

Aalto University's own professors and researchers deliver almost 50 per cent of the training and facilitation. A wide international network of visiting faculty covers the remainder. The combined resourcing model helps to mitigate faculty bottlenecks and recruit the best match for the programs' and customers' needs.

**From leadership to communityship**

Professor Henry Mintzberg – one of the globally most esteemed strategy scholars – has advocated for a better and wider definition of leadership development. He prefers the term "communityship" instead of mere leadership, as it entails wider engagement of the organization. The more knowledge-intensive the organization, the more involvement is often needed.

Nurturing only individual talents may indeed be a relatively slow way to drive change. Instead of parachuting in individual executives, a growing number of organizations are interested in fully customized executive development programs with engaging project assignments and echo teams.

To better meet stakeholders' expectations, Aalto University merged its commercial continuing education activities in March 2014. Despite the merger, the three brands will remain separate and strongly focused while benefiting from their close relationship. Aalto EE – which is also the juridical platform for all the operations – will continue to cater for senior and middle management; Aalto PRO will focus on professionals, specialists and managers; while Aalto ENT – a whole new brand for entrepreneurship development – will introduce a range of new solutions for ambitious and growth-driven entrepreneurial ventures and family firms. By the end of 2014, Aalto EE will employ around 120 people and have total annual net sales of around EUR 20 million.

In the future, there will be a growing need for an even more holistic approach to organizational development. Even if the Executive MBA and MBA programs and open enrollment programs retain their appeal, which seems likely, there will be an increased demand for organization-wide development programs. Performance and outcomes will also be tracked more systematically both in quantitative and in qualitative terms. Impact and experience – these factors will make the industry winners of the future. ■

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# Political prospects of Ukraine in the context of "Revolution of Dignity"

Expert article • 1494

Admittedly, it is quite difficult to speak about political prospects of the country that has gone through a three-month confrontation between peaceful citizens and corrupted autocratic regime when foreign troops invade the country using force to convince the country to define its future. Nor it is easy to envisage the prospects of the country that has historically served as an arena for clash of civilizations. Its nation is still being politically shaped, and the nature of state institutions is rather superficial. However, I am ready to share my thoughts about the chance that Ukrainians got after death of hundreds of protesters fed up with the corrupted and kleptocratic regime.

Today Ukraine has received one more chance to build a state which would serve the society. We have repeatedly noted the emergence of the elements of civil society but deep roots of Soviet political culture kept overcoming the social energy. I am referring to the events in autumn of 2004 known as the Orange Revolution when people managed to stand behind their choice (at the elections of the President) but failed to defend it in terms of control and participation. Current situation is different yet it is probably too early to claim that we have overcome the crisis of political culture. Citizens are increasingly more aware of the importance of openness and accountability of the authorities, but endowing this societal function institutionally and intellectually is still problematic.

The issue of the new quality of civil society, targeted at control and monitoring of the actions of politicians, holds a special place on the political agenda in Ukraine.

The new government is conducting a series of steps that bring authorities closer to citizens, abolishing benefits and privileges. For now, it is difficult to assess the balance between populism and conscious will in these actions. Apparently, such steps are caused by the difficult economic and financial state of Ukraine. In the new government there are many people who do not have practical administrative experience, but today it is rather an advantage than a drawback. The main challenges that the new government faces concern checks and balances system at the level of the Constitution, reforms of political institutions, establishment of the new paradigm of political communication, namely effective civic involvement into public policy making.

The constitutional dimension of political processes lies first and foremost in a well-defined division of power between branches and institutions of power. It concerns balance of power and its distribution between the representative and executive power, independence of judiciary, power decentralization, and implementation of local self-government principles. In this regard, the trend towards strengthening the representative power, transition to parliamentary-presidential system of governance is important. But at this point some challenges arise. Firstly, in the political discourse there is no perceivable attention to democracy as a principle of political organization both at the legal level and in political debates. Secondly, another big challenge is the quality of political parties that would have to play a prominent role in representative democracy. Political parties are mostly leader-based organizations without traditions of transparent funding and democracy within. In this context there is a clear need for careful selection of a system of parliamentary elections, which would stir up the debate and democracy in the party, and legislation regulating political finance. Electoral system with open regional lists is discussed as an option in Ukraine. The law on the Partial State Party Financing, which could leave corruption and oligarchic funding behind, has not been enforced keeping the nature of political party funding unclear.

The issue of the new quality of civil society, targeted at control and monitoring of the actions of politicians, holds a special place on the political agenda in Ukraine. During three months of confrontation with Yanukovych's regime the request for accountable, uncorrupted authorities, fair justice, and law enforcement bodies that are held responsible to citizens has been crystalized. There are also high expectations of anticorruption bureau and commission that are responsible for lustration in the justice system and law enforcement bodies. One of the main reasons of protests was inability of ordinary citizens to obtain guarantees of a fair and impartial trial. The protest was provoked by permissiveness and impunity of people close to the regime as well as corrupted judiciary.

Administrative reform, implementation of transparent and inclusive procedures of policy making, improvement of the quality of civil service, and continuation of the European integration course are of high importance for political agenda of Ukraine.

Therefore we can single out two dimensions of political prospects for Ukraine. In short-term perspective, these are democratic and fair elections of the President of Ukraine (May 25, 2014), conduct of the constitutional reform, and adoption of the amendments to the Constitution of Ukraine that would take account of balance of responsibilities between different institutions, decentralization, pivotal reforms of justice system and public prosecution bodies, and finally conduct of the early parliamentary election (Verkhovna Rada of Ukraine) according to the new electoral law right after adopting amendments to the Constitution. In the long-term perspective, it concerns modernization of the country based on European values and legislative pillars. However, the occupation of the territory of Ukraine by the neighboring state, Russian Federation, which apparently is not willing to accept revolutionary democratic changes, distancing of Ukraine from the Russian influence zone and approximating to the friendly open zone of cooperation with the EU and NATO, can hinder the realization of these prospects. ■

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# Ukraine after Euromaidan – country on the path of reforms in the conditions of deep economic and political crisis

Expert article • 1495

In the end of 2013 a deep political crisis started Ukraine. The events of Euromaidan led to defection of former president Viktor Yanukovich and his top Government officials who were presumably involved in various corruption schemes or ordering of brutal use of police force against demonstrators. The constitutional majority of votes in parliament voted for a new coalition, new government and return of previous version of constitution limiting the authority of president. It was presumed that Ukraine's economy will not be able to stand such large scale crisis. But the victory of Euromaidan protest and following Russian invasion and annexation of Crimea mobilized political parties in parliament for intensive work on reforms needed to revitalize Ukraine's economy. It remains to be seen how long the coalition in the parliament will be able to stay united and work effectively. Major challenges for the new Government headed by Prime Minister Arseniy Yarseniuk also include tackling with consequences of Russia's annexation of Crimea and threat of military intervention, reforms of the system of local self-governance, preparation for the presidential election on May 25, 2014.

The activity of foreign investors in Ukraine is rather modest, largest part if western investment coming to Ukraine are indeed return investment by Ukrainian companies though the offshore companies. The negative factors that have impact on investment activity in Ukraine are: political instability, complicated legislation and high taxation rates for corporations (in particular, large contributions to social security funds, VAT refund constraints), corruption in government, police and justice system, extensive grey economy. In the end of 2013 many Ukrainians expected that signing the Association and Free Trade Agreements with the EU would eventually help to resolve the most important problems: corruption, weak economy, ineffectiveness of governance. For the past two decades the credibility of Ukraine in fulfilling agreements with International financial organizations has been exceptionally low. Ukraine got a new chance on the 20th of March, 2014 when Ukraine signed the political part of Association agreement with the EU. Signing only political part of agreement with the EU derives from the past negative experience: Ukraine has to demonstrate that it is capable of tackling the problems of corruption.

The EU and International Monetary Fund have agreed on a set of requirement for financial assistance to Ukraine. The EU's key requirements for signing Association Agreement include political reforms, free elections, and rule of law. The IMF in its documents outlines them more specifically: reduction of governmental spending, increasing independence of judiciary, reform of financial regulation, liberalization of currency rate , liberalization of energy market (particularly, increasing of consumer prices for natural gas and electricity, reforming the electricity market), reform of social assistance programs.

The reduction of government spending is likely to coincide with reformation of regional governance. At present the old style regional state administrations function as centers of regional level decision making alongside with the institutes of local self-governance. The increasing of the role of local self-governance has been a long awaited goal. In the current situation it may also serve for channeling some separatist moods in east Ukrainian regions. There is a long list of other important measures, including increasing transparency in government tenders, decreasing unnecessary spending on staff, cutting certain subsidies and benefits for particular groups of population. At the same time Government plans to increase taxes for companies and individuals.

Reform of energy market is probably the most painful both for population and for the political parties. Energy prices for population are highly subsidized.

Reform of energy market is probably the most painful both for population and for the political parties. Energy prices for population are highly subsidized. At present household consumers pay four time less than actual price of natural gas. Similarly households pay only 23% of electricity's actual cost. The difference is covered by the state creating a huge extra spending for Ukraine's budget. As a rule Government had problems with covering the price difference, the state owned nuclear energy producer Energoatom was hit particularly hard when state failed to cover the cost supplied electricity. As a result the company couldn't invest in modernization of production and is eventually balancing on the edge of bankruptcy.

The implementation of these reforms leads to certain serious risks. Firstly, reform of regional self-governance system may facilitate local political competition, strengthening of local politicians and thereby creating new challenges for the established political elites in Kiev. The reforms on energy sector and reduction of subsidies will

bring significant savings to the state budget, but it will also cause public discontent with raising prices for electricity, natural gas and heating. This may lead to new mass protests in the regions, Russia may use this discontent and try to influence local politics through Russian minded radical movements. Secondly, the Association Agreement contains chapter that covers security cooperation between the EU and Ukraine – this cooperation may seriously undermine the positions of Ukraine's defense industries. These industries employ almost a 100 000 workers mostly in Eastern Ukraine. Cooling down in the relations between Ukraine and Russia leads to serious threat to Russia's national security. Ukrainian defense industries are important and sometimes irreplaceable suppliers of parts and equipment for Russian army. Thirdly, the improvement in the relations between Kiev and Brussels may eventually lead to easing visa regime with Schengen zone and tightening migration procedures on Ukraine-Russia border. There are a about three million Ukrainians working in Russia and three million in the EU countries, labor migrants are potentially most vulnerable to changes in border crossing procedures. Fourthly, the Free Trade agreement carries a range of risks of Ukrainian producers and retailors. The regime of special preferences for Ukrainian exports to the EU will last from May to November 2014. After that also Ukrainian market will become more open for western products. ■

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# EU military crisis management – the need for common funding

Expert article • 1496

Since 2003, the European Union (EU) has deployed six military crisis management operations in the framework of its Common Security and Defence Policy (CSDP). However, the deployment processes of these operations have often been slow and cumbersome; most CSDP military operations have taken more than six months to get on the ground.

This article focuses on one particular factor that contributes to the slowness of the EU's military deployment process, i.e. the lack of common funding. It will start by explaining how CSDP military operations are currently funded before moving on to provide policy recommendations on how to reform the existing funding system in a way that would foster rapid reaction.

**Existing Funding System**

At the moment, Article 41, § 2 of the Treaty on European Union (TEU) prohibits using the EU budget to cover 'expenditure arising from operations having military or defence implications'. As a result, CSDP military operations are funded primarily according to the principle of 'costs lie where they fall', which means that each state participating in such operation is responsible for covering the expenses arising from its own contingent.

The only exception to this rule is a small amount of pre-determined 'common costs', which EU officials 'guestimate' to be around 5-10% of an operation's total cost. The current list of common costs includes implementing and running the HQ, infrastructure and medical services for forces as a whole, satellite imagery, possible reimbursements to/from other organisations etc.

These costs are funded through the Athena mechanism, which is a financial instrument outside the EU budget created in 2004. It is managed by the Council General Secretariat and funded with EU Member States' annual contributions, the sizes of which are determined using a Gross National Income (GNI) index. Thus, Germany provides approximately 21.5% of Athena's funds while Finland provides approximately 1.5%.

The problem with the existing funding system is that common costs are minimal compared to what each Member State participating in a CSDP military operation has to pay for its own contingent. Since CSDP military operations are often deployed to areas where most Member States do not have direct interests at stake, they tend to be reluctant to participate in them with large and expensive contingents. Due to this reluctance, the EU's force generation process is often excruciatingly slow, as the case of EUFOR RCA has again shown in early 2014.

**Increasing Common Funding**

In order to increase states' willingness to contribute to CSDP operations, the EU has started to call for increased common funding in the area of security and defence. In October 2013, CFSP High Representative Catherine Ashton noted that the Member States' 'willingness to address the issue of an increase of common funding areas of application and enhanced Member State support for CSDP missions and operations' should be discussed. Furthermore, the December 2013 European Council concluded that the financial aspects of CSDP operations 'should be rapidly examined, including in the context of the Athena mechanism review, with a view to improving the system of their financing'.

There are two options for increasing common funding for CSDP military operations. Firstly, EU Member States could renegotiate the TEU in a way that they could be financed directly from the Union's budget. As one official from the EU Military Staff put it, 'if we in Europe have community money for infrastructure, agriculture et cetera, why cannot we have community money for military and defence?'

However, this is unlikely to happen anytime in the near future because there is currently very little appetite in EU capitals to open the political Pandora's box that is treaty renegotiations. Furthermore, funding CSDP military operations from the EU budget would grant the European Parliament (EP) a say over military CSDP, which is something that most EU Member States are not ready to accept.

Secondly, EU Member States could expand the list of the common costs that are funded through the Athena mechanism. Since Athena is not part of the EU budget, expanding the list of common costs would not require a treaty change and would keep the EP at a distance from military CSDP. It would also be a practical solution because Athena's administrative structures have already proven their effectiveness in the previous operations that the mechanism has funded.

However, the trick is to get all 28 Member States to agree to an expanded list of Athena-funded common costs. This will not be easy because wealthy countries that do not normally contribute large cotangents to CSDP military operations, such as Germany and the UK, are likely to resist such an expansion because they would have to cover most of the increased bill. However, if they want to promote the EU as a relevant actor in international crisis management, they have to accept the necessity and desirability of increasing common funding. ■

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# Border security as a field of practice between Finland and Russia

Expert article • 1497

Today the Finnish Border Guard has two important domains of international cooperation: cooperation with Russia and cooperation in the European Union. These two domains of action are both very important, although they have different histories. They are not, however, isolated. Quite on the contrary - they are dependent on one another. Finland's eastern land border is the longest land border there is between EU and Russia and it is important to the EU as well. Russia has land borders with five EU member states: Finland, Estonia, Latvia, Lithuania and Poland. The EU-Russia land border has not been static over the last two decades, but it was gradually extended as a result of EU enlargement. From 1995 to 2004 Russia's only EU neighbor was Finland. And only since 1st of May 2004 the border has got its present size and shape.

The Finnish Border Guard has a long history of successful interagency cooperation with the Russian and Soviet border service. Finnish border authorities have a lot of experiences of cooperation with the Russian colleagues and these experiences are important also at the EU level. Border security has emerged as a top priority for the EU. The gradual abolition of internal border controls has made the EU vulnerable to cross-border security threats. In response, the border security problems are managed by the EU and the EU border security agency Frontex not just at the actual border, but also inside the member states, in cooperation with the neighboring states and in third countries. These developments challenge the traditional ideas of territoriality and borders. Border security agenda is two-fold in both domains: to maintain the high level of security, while enabling smooth and fast border crossings.

Role of borders have hardly been discussed in the recent security studies. In his recent book "EU-Russian Border Security" Serghei Golunov introduces a concept "borderization" of a security issue, by which he means construing such an issue as having its solution in border protection measures. This means that the problem is construed twice: first, as a security issue, and then as something that should be solved within the framework of border policy.

At the end of the Cold War, it was even argued that borders have lost their importance. Claims of the death of states and state sovereignty, however, were premature. The role of borders has changed, but borders have not vanished. Globalization has challenged the state borders, which has been reflected in the increase of interdependence. States are increasingly dependent on each other. At the same time global security problems are becoming more dependent on each other, forming a complex of security problems.

The Finnish-Russian border forms a regional security complex. Security concerns do not travel well over distances and threats are therefore most likely to occur in the region. The security of each actor in a region interacts with the security of the other actors. There is often intense security interdependence within a region, but not between regions, which is what defines a region and what makes regional security an interesting area of study.

Much research on EU-Russian border security conceptualizes it as an exclusion line that keeps Russia outside of EU cooperation. This is because research and practice do not meet in border security research. The perspective of practitioners, who ultimately determine border security policies, is not taken into account by researchers focusing on EU-Russia border security issues. When we focus on the actual practices of cooperation between the Finnish and Russian border authorities, the EU-Russian border is not just exclusive but also inclusive. It is a bridge of cooperation where the border authorities learn to cope with old and new border security issues, tackle them together, and where they learn to understand each other.

Opening up the practices of cross border interagency cooperation is particularly important because even those few studies that shed light on EU-Russian border security policy do not explicitly focus on border security field, but they look at the foreign policy and defense issues. This is in part, because it is very difficult for researchers to get access to relevant sources in cross border interagency cooperation. At the Finnish-Russian border a certain regional border security complex has emerged over the years. Social learning has taken place and intended and unintended consequences of cooperation have also spread. The regional border security complex has binded Finland and Russia together by positive experiences of handling the issues in cooperation. In order to maintain fast and smooth border crossings, cross-border, interagency cooperation of the border authorities must continue and evolve. As Finland's border security policy cannot be separated from its EU context, it also opens a gateway of border security co-operation to the EU level. ■

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# From IT security to cyber security – bits destroying our physical world

Expert article • 1498

Attacks on IT systems are a daily nuisance. We hear about denial of service attacks, leaked user accounts, passwords and credit card numbers, and how different organizations spy on each other, on companies and citizens of the world. These are not surprising news, ICT evolves and it is being used for various purposes, both legal and illegal. Yet, a much more serious and lethal crisis is just around the corner, we are just waiting for the first major events to really happen.

Our modern society is totally dependent on ICT. All our digital systems and services are becoming intertwined and connected to the Internet. Power grids are becoming intelligent, smart, and water delivery is digitally controlled with various remote access functions. Our road and air traffic is controlled with digital systems and communication networks. The production of goods, even power, is automated and handled with digital systems.

One only needs to use an Internet search engine for a few minutes to find tens, if not even hundreds, of reports of industrial control systems (ICS) that have serious security flaws and security holes built on purpose to ease their daily maintenance. We can easily find in the Internet also various exploits to use against those systems, to take them down from anywhere and at any time. Some of these vulnerabilities are simple enough that a schoolboy can hack the system and cause it to fail.

The scientific community had a good reminder of the scale of this problem when an MSc. thesis from the University of Cambridge used the Shodan search engine to find thousands of vulnerable industrial control systems in the world. This work was since then continued by many groups, including Project Shine, which has so far found 1 million industrial control systems on the Internet.

At the Aalto University, we tried to find out the scale and significance of the problem using Shodan at a national level. We found thousands of industrial control systems in Finland. Many of the targets had, for example, no secure login installed or the administrator password openly available. Some of the found systems were easily identified as misconfigured or otherwise vulnerable. But we could not go very deep in our study due to the fear of breaking the Finnish law and becoming criminals ourselves. Thus, we can relatively easily find targets but can not fully say which of these systems should be openly available and which should not; it would be safe to assume that most of the systems must not be there for the whole Internet community to connect to.

There seems to be the same naïve thinking in the industrial control systems community as the Internet community had about 20-25 years ago: who would want to harm us? Back in the early days of the Internet, people and users knew each other and the concept of security was somewhat of an afterthought; it isn't anymore.

In the industrial control community, system vendors and their customers have neglected to take the security of their environments seriously; many have been on the right track, but so many are still lost or simply exercising the classic wishful thinking.

However, the kind of systems we see connected openly to the Internet even in Finland is frightening: power plants, water delivery, hospitals, jails, railway track control systems, gas stations, grocery stores, building automation, and so forth. The vast majority of these systems will only harm a small group of people, e.g., in one office building, but there are systems that if taken down will cause casualties either directly or in due time.

In addition to the networked targets, we have industrial and automation systems that are not connected to the Internet. A direct connection is not, however, mandatory, as was evident with the Stuxnet strike on the Iranian nuclear program; the break-in happened with a USB stick.

In our modern globally connected digital society, we do not have the option to simply hope for the best. We have to find all these vulnerable systems today, make an assessment of their use, and start fixing the problems. We have not yet seen a crisis caused by an attack on a major civilian infrastructure, but it is only a matter of time, when the first incident will be reported. Hopefully, governments and the industry at large have enough evidence to start acting now, before we see the first catastrophic event. A further challenge is that in the digital world new weapons and exploits are manufactured at the speed of light. ■

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JACEK BEŁDOWSKI & JAN FIDLER

# Danger remains from World War II in our shared waters

Expert article • 1499

Following large-scale use of chemical weapons in World War I, extensive preparations were made to further develop chemical warfare and increase its capacity. Even though they were never used on the European battlefield, large amounts of chemical weapons containing such agents as mustard gas, Clark I and II, and Adamsite remained after the end of the war. In order to dispose of them, dumping at sea was considered the most appropriate solution at the time.

British and US military administrations dumped a share of munitions outside of Baltic area. The Soviet Union dumped at least 50,000 tonnes of chemical munitions containing an estimated 15,000 tonnes of chemical warfare agents in the Baltic Sea, primarily in the Bornholm Basin. Other official dumping sites were the Little Belt area and the Gotland Deep. In addition, dumping took place en route from Wolgast, Germany, where vast amounts of chemical munitions were stored.

The possibility that chemical munitions or their solidified contents can be washed ashore is small but real. Furthermore, pressure to exploit Baltic Sea resources is growing, with powerful new technologies enabling activities in more remote areas, including the deep-sea regions where dumpsites are located. Construction projects such as the installation of wind farms, cables or pipes, as well as other sea-bottom activities such as trawler fishing are increasingly claiming space within contaminated areas. Fishermen may be especially at risk since they can come into direct contact with dangerous toxins. Furthermore, in the event of a mechanical disturbance, a large-scale leakage could pose a serious biohazard.

In this context and under the leadership of the Institute of Oceanology of the Polish Academy of Sciences (IOPAN), 11 government and research institutions from Poland, Germany, Sweden, Finland and Lithuania launched the CHEMSEA project in 2011. With Funding from the EU Baltic Sea Region Programme 2007-2013, the recently completed initiative sought to close knowledge gaps by mapping and characterizing the dumping sites, developing guidelines in order to reduce potential threats to the environment and fishermen and preparing a region-wide contingency plan.

Surveys performed in the Gotland Deep recorded almost 40,000 objects, of which roughly 17,000 were later classified as probable munitions and 33 wrecks, which could potentially contain chemical weapons. Taking into account the visual confirmation of more than 250 of those targets, it appears that 50% of such objects may actually be regarded as chemical munitions. Furthermore, project investigators found indications of chemical weapons dumping worth following up on at the unofficial dumping sites of Slupsk Furrow and the Gdansk Deep.

Using biomarkers, CHEMSEA investigators also conducted studies on cod health at chemical weapons dumpsites and noted some stress responses in organ, tissue, cellular and subcellular levels. Researchers also deployed cages with mussels and recorded higher stress responses in mussels deployed closer to the dumped chemical weapons sites and closer to the sea bottom.

At these dumping sites, researchers also found the derivatives of various chemical weapons agents in the sediments: sulphur mustard, Adamsite, Clark I and Clark II, triphenylarsine, Lewisite I and Lewisite II. Nearly a third of the samples the researchers collected and analyzed contained at least one trace of chemical weapons agents. At the Gdansk Deep area, concerned as a potential dumping site, half of the samples analysed were confirmed for pollution.

CHEMSEA has confirmed the hypothesis of munitions being thrown overboard while en route to designated dumping sites, which means the risk of contact with hazardous agents extends beyond the limits of official dumping sites. During the last ten years, there have been 44 reported incidents of chemical munitions catches around the region. Fishermen and other groups working at sea should be firstly aware of the risk existence and secondly ready to take precautionary actions to minimize the threat. The possibility also exists, as examples over the last decades have shown, that chemical weapons agents can reach the coastlines in the form of munitions pieces washed ashore. In light of this, CHEMSEA developed an Awareness Training Program, which can be carried out around the region and highly encourages national authorities to implement it as mandatory for selected target groups.

Although national procedures for dealing with incidents involving chemical munitions are well established in most countries around the region, no transboundary response plans exist and responsibilities are divided between different entities, depending on the country in question. In order to minimize these discrepancies, CHEMSEA developed a unified model contingency plan, which it encourages national authorities to implement in the context of crisis management procedures.

What the findings of the project reveal is that chemical munitions dumpsites, although not representing an immediate danger, will continue to be a problem for the Baltic Sea. On one hand, they represent scattered point sources of pollution of unknown magnitude and difficult to control. On the other hand, they are a major economic impairment, making the Baltic Sea a less safe and potentially more costly area for investment. From an environmental point of view they present a risk for marine biota through chronic exposure. Further investigations concerning the magnitude of leakage, the rate of corrosion, the transport of contaminants and possible technical solutions to recover the most dangerous pieces of chemical munitions are needed. ■

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# Baltic Transport Outlook 2030

Expert article • 1500

The Baltic Sea Region (BSR) is facing increasing trade until 2030, both within, to and from the region. This development demands appropriate infrastructure and an efficient transport system. Bottlenecks must be eliminated in order to facilitate the internal market mechanisms, improve the territorial cohesion and improve the competitiveness of the region.

The Baltic Transport Outlook 2030 estimated of the future transport flows in the region and identified potential bottlenecks in the regions transport system until 2030. BTO2030 revealed bottlenecks and gave recommendations on how to solve them.

The BSR covers an area of around 2.5 million square kilometres with a population of some 94 million people. The region includes Norway, Sweden, Finland, Estonia, Latvia, Lithuania, Poland, Denmark, parts of Russia and parts of Germany.

The Transport flows increase significantly between 2010 and 2030. The most significant increase in international passenger transport is a 100 percent rise in rail passenger transport. This is compared to an increase in private car transport by 20 percent and an increase of air passengers by around 80 percent. In freight transport an increase 140 percent in container traffic is anticipated. Non-container maritime freight is expected to increase at a lower rate and maritime oil transport is expected to decline.

In maritime transport, the total cargo throughput of the ports in the region is estimated to increase by 228 million tonnes or by 30 percent, an average annual growth rate is of 1.3 percent. Inland waterways are estimated to increase by 27 percent by 2030.

In land transport, the number of vehicle-kilometres by trucks crossing country borders in the region is estimated to increase by 73 percent, an annual growth of 3 percent. The rail freight transport is estimated to increase by 43 percent or 145 million tonne kilometres, a growth of 1.9 percent per year.

The bottlenecks are different in character. From an infrastructure point of view border crossings with roads are simple, while for railway there are large interoperability problems, due to different gauges, electricity supply and signalling. The most cost-efficient way to resolve bottlenecks are investments in road, port and airport infrastructure – both hard and soft. Railway infrastructure is much more costly, but for environmental reasons, railways are expected to provide the backbone for intermodal transport in the long-term.

Maritime transport links countries across the Baltic Sea. Demand for seaborne freight transport is strongly growing and requires major port investments, in particular for intermodal transhipment facilities (containers etc.) and investments for efficient hinterland rail connections.

At the administrative level, accessibility is limited by border controls with inefficient customs procedures, especially in relation to non-EU and non-Schengen countries.

The prioritised BTO2030 recommendations are: A. Establish a process of joint infrastructure planning of the Strategic Network. B. Develop a transport model that takes into account the specificities of the BSR. C. Improve efficiency of cross-border movements of cargo on the external EU-borders. D. Establish a ”BTO Forum” for increased cooperation.

The key issues in relation to infrastructure are: 1. Develop and promote the Strategic Network. 2. Enhance railway links in the Strategic Network by implementing the ETCS. 3. Implement Via Baltica and Rail Baltica projects. 4. Promote Baltic Motorways of the Sea and Short Sea Shipping. 5. Bridge maritime channels by fixed links and connecting hinterland infrastructure. 6. Promote the relevant sections of the BSR Strategic. 7. Develop terminal capacity together with sufficient hinterland network.

The key issues in relation to policy are: 1. Integrate the Green Corridor concept in the Strategic Network. 2. Promote road safety measures. 3. Implement the Single European Sky initiative in all BSR countries. 4. Accelerate technology shift towards cleaner vehicles. 5. Liberalise cabotage and introduce EMS. 6. Promote the development of landbridge railway connections to Asia.7. Ensure air transport services to low population-density areas. 8. Establish initiatives for soft measures for more efficient use of the infrastructure.

The target groups for the BTO2030 recommendations are: National long term infrastructure planners in the region; National, regional and local politicians; Governments and governmental agencies; Public and private stakeholders in the transport sector; Transport networks in the region. ■

BTO2030 was initiated by the Swedish government and funded by the EU TEN-T and the countries in the BSR. The study was conducted in 2010 and 2011. BTO2030 is a strategic priority within the Baltic Sea Strategy, adopted by the European Council in 2009. Read more on www.baltictransportoutlook.eu.

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# The lost and found for Latvia – 10 years of European Union membership

Expert article • 1501

May 1st of 2004 was a long-awaited date for Latvia, when it along with seven other current member states became part of the European Union (EU). The EU promised to bring security, economic prosperity, cultural sustainability and increased political importance for the small, renewed Baltic state. The "promises" produced either by the Latvian or EU politicians created expectations among the Latvian officials and society that have driven the country's participation in EU decision making, both domestically and in external policy, during the last 10 years.

Latvia had been expected to prove itself to be a trustworthy partner in the EU. Being one of the "new", "post-communist" member states, and being among the poorest EU member states, made it necessary for the country to learn EU politics and demonstrate itself twice as much. The 10 years of aggregating respect, and thus self-awareness, naturally came with lost idealism concerning the constitution and the functioning of the EU that can easily be seen in the public's attitudes towards the EU. The acquisition of the image of a responsible partner was very much tied to the logic of re-integration into the Western world and Euro-Atlantic structures. Latvian diplomats and statesmen saw the deepening of the country's EU ties as a crucial element in their policies. Political support for the Constitutional Treaty, the Treaty of Lisbon, as well as joining the Schengen area and the Eurozone, went almost unchallenged among the domestic political elites. The adaptation period, together with the clear and targeted pursuit of increased political and economic interdependence with the EU, resulted in Latvia becoming one of the 16 most institutionally integrated core-EU countries in less than 10 years of membership.

Latvian membership in the EU has been a time of rapid economic growth and steep falls. Latvia has found economic gains in structural funds and increased foreign investments. Throughout the "Baltic Tiger" years of rapid but unsustainable economic growth, through the years of deep economic recession and harsh but necessary austerity measures, during the current years of economic recovery and the return to dynamic growth in individual and state revenues, Latvia had access to growth-facilitating Structural Funds, the Cohesion Fund, and agricultural subsidies, which exceeded the country's payments into the EU budget multiple times over. The increased foreign direct investments and increasing number of EU and world enterprises doing business in Latvia, and the export of services and goods in the EU and under the EU trademark, have provided previously inaccessible opportunities for many Latvian businesses in diverse industries. Travel, employment and educational opportunities for the Latvians made the EU a project worth preserving in the eyes of the local population, socializing at least two generations into a fuller understanding of Western values. Those have also been imported back into Latvian society and politics during the last half a decade.

At the same time, all the positive aspects have not helped the small country to prevent significant population loss through workforce emigration and low birth rates, almost permanent trade deficits, as well as occasional questioning of the country's military safety and in-depth debates on the Latvian perspectives on the future of the EU. The struggle against economic marginalization in the EU, the prevention of the down-sides of a liberalized common market, and worries of institutional under-representation are still very much alive in the Latvian population and among public officials and politicians. Materialistic and short term problems continue distressing society and politicians. Foreign policy and sectoral policies are still reactionary and responsive rather than pro-active. This is a result of the tendency to deal with immediate problems, including those raised by new EU legislation and unfinished structural reforms in a number of sectors.

Latvia has experienced a rather turbulent first decade of EU membership. It has found a righteous place in the world – residing among countries sharing the same liberal democratic values, honoring human rights and globally sustainable political and economic activity. It has lost its economic freedom, but acquired economic security. It has attained a cultural sanctuary within the EU. Now the task for the next 10 years of EU membership is to continue political integration not only on an elite level, but throughout the population of the Republic of Latvia. A more self-aware foreign policy and debates on the future of the EU from the point of view of Latvia are a necessity for the next decade of Latvia's EU membership. It is essential to avoid an elitization or even privatization of the matters concerning the functioning and institutional shape of the EU in order to grow the public's awareness and self-identification with the European Union for both economic and security reasons. ■

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# Geopolitics of a minority – Latvian Russian-speakers in the shadow of Crimea

Expert article • 1502

When a big nuclear state gets involved in large-scale military actions in order to „protect" its compatriots in a neighbouring country, one's eye inadvertently turns to other potential objects of such „humanitarian" interventions. The case in point is, of course, the Russian Federation, which used the protection of the Russian-speakers as a pretext for sending its troops to the Ukrainian territory of Crimea. What role the protection of compatriots plays in the Russian geopolitical strategy, is a very contested question. Nevertheless, post-Soviet countries with substantial Russian-speaking minorities have good reasons to worry about their security – especially, taking into account the increasing unpredictability and anti-Western stance of the Russian foreign policy.

Among the post-Soviet countries, the largest proportion of the Russian-speakers lives in Latvia – a Baltic country with 2 millions of population, and a proud member of NATO and the EU. Around a third of the Latvian population are Russian-speakers, majority of whom are Soviet-era immigrants. Russia has frequently expressed its concerns about the current situation, pointing at Latvian citizenship and language policies as being discriminatory towards the Russian-speakers. Therefore it would be reasonable to compare the situation of Russian-speakers in Latvia and Ukraine.

At the first glance, the similarities might seem quite striking. Just as their Ukrainian counterparts, Latvian Russian-speakers have not been fully integrated in the new, post-Soviet state structure. A significant proportion of Russian-speakers, especially the oldest generation, have strong nostalgia for the Soviet-era, its imperial grandeur and authoritarian welfare policies. This longing is reinforced by the media outlets of the Russian Federation (mainly television), often used for propaganda purposes and popular among the Russian-speakers of Latvia. The overlapping of linguistic and geopolitical identities is much stronger in Latvia than it is in Ukraine. Surveys show that most Russian-speakers feel a strong attachment to Russia and a significantly weaker identification with Latvia than ethnic Latvians. Russian-speakers also exhibit a high degree of political institutionalization. Most of them vote for the party „Harmony Centre", which has consolidated the Russian electorate around a leftist, mildly pro-Russia program.

However, there are also differences. Firstly, unlike in Ukraine, in Latvia the settlement of ethnic groups doesn't have clear regional disproportions. Although Latgale, the Southern-Eastern part of Latvia is pre-dominantly Russian-speaking, the majority of Latvian Russian-speakers are living in large cities, like Rīga, Jelgava, and Liepāja. For this reason, even if one admits the possibility of violent protests, some form of a territorial separatism is scarcely an option. The Latvian state, despite its many deficiencies, is also much stronger in terms of fighting corruption, judicial independence, and democratic institutions than the Ukrainian state of the Yanukovich era. There are also no significant income differences between Latvians and Russians, and the average wage in Latvia is higher than in the Russian Federation. Assuming that the pro-Russia sentiments in Ukraine have been at least partly promoted by income inequalities both in the country and between the countries, in Latvia the economic factor plays no similar role.

These considerations show that the comparison of Russian-speakers in Ukraine and Latvia is limited – as all comparisons are. This doesn't mean, however, that no negative developments are possible – esp., with increasing tensions between Russia and the West. First of all, the recent developments in Ukraine have strenghtened the position of the Latvian „hawks". These are defenders of the hard line against the local Russians, including the immediate closing of the Russian-language schools, establishment of „language militias" to monitor the use of the state language, etc. This, in turn, can help the local Russian radicals, who with the familiar „anti-fascist" slogans might call for the involvement of the Russian Federation. Such developments are unlikely, since the number of radical activists is quite small on both sides, and Latvian NATO membership is still a powerful factor discouraging possible Russian military involvement. However, in 2014 Latvia is approaching two elections (the European in May and the parliamentary in October), and many Latvian politicians on both sides of the ethnic divide are eager to exploit the sensitive topics of language, history, and geopolitics for electoral gains. Such strategies seemed rather innocent in more peaceful times. But now, with the growth of Russian geopolitical assertivness, a divisive approach to politics is becoming increasingly problematic.

Mainly due to the Ukrainian events, there is an increasing awareness that the security of Latvian state and society depends on the integration in European and Euroatlantic structures. However, this integration presupposes not only military cooperation and common economic regulations. It also means the acceptance of the certain values of European political culture - respect for minority rights, capacity for dialoge and self-restraint in all segments of the political spectrum. ■

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# A positive force majeure of culture in Rīga 2014

Expert article • 1503

If you have been to Latvia before, you know that culture is part of the everyday life. Virtually everyone in Latvia sings in a choir, is part of a dance group; people of all ages and all over the country love going to the theatre, attending concerts, going to the opera, or visiting art galleries; singing and dancing are part of our holiday traditions. Culture is at the heart of our national identity, it is what kept the idea of an independent Latvia alive during many decades of occupation; and the annual cultural events calendar becomes fuller and more diverse year by year.

It is because of the central role which culture plays on a day to day basis that Rīga is especially proud to bare the title of European Capital of Culture this year, thus elevating the already central role of culture in Latvia to an even higher level, and having the incredible opportunity of sharing it with the rest of Europe, and hopefully beyond.

The Rīga 2014 programme was officially unveiled in the middle of January, with over 15 000 people taking part in some of the key events throughout the day despite temperatures of -15°C.

Throughout this year, culture will step out of its traditional confines and literally spill out on to the streets of Rīga so that each resident and visitor of Rīga, whether they consider themselves connoisseurs of culture or not, will feel that Rīga really is the European Capital of Culture. Starting from the courtyards of the Soviet built sleeper suburbs, through to the creative quarters established on the outskirts of the centre by artists, as well theatres, galleries, art and cultural centres of Rīga, the opera, the new library building, and even places such as abandoned buildings, parks, streets, courtyards, and the central market will become venues of cultural happenings. It will be everywhere, and for everyone, shattering the concept of the exclusivity of culture.

We like to say that there are 58 neighbourhoods of Rīga, and the capital of culture year will inject a dose of cultural vigour into all of them. The overarching theme of next year (and also the name of the programme), the central aim, is for culture to be a positive Force Majeure - an extraordinary energy with the power to transform a city, a perception, a life.

Over 200 events can be found on the Rīga 2014 calendar (excluding the smaller scale local level events), all arranged in six thematic chapters: Freedom Street, Amber Vein, Road Map, Thirst for the Ocean, Survival Kit and Riga Carnival. Events range from conceptual to entertaining, festivals to operas, performance to circus, traditional to contemporary, with ample opportunity for participation.

Highlights include the opening of the KGB house, which will feature tours of this notorious building, and numerous exhibitions. In the summer months, incredible summer solstice celebrations are planned at the end of June, and the World Choir games come to Rīga in July. In the fall the annual Survival Kit art festival will hit the streets of Rīga. Two new operas have been composed for the occasion – Mikhail and Mihkail play Chess, and Valentīna. Theatre will be evident throughout the year with multiple instalments of forte. forte festival, and, of course, music too will be central, with festivals of Jazz, contemporary and classical music, as well as concert series Born in Rīga featuring world renown classical musicians born in Rīga.

For a break from the bustle of the city you can also visit Rīga's partner city Sigulda – the birthplace of all of Latvia's Olympic heroes, a mere 50 km away from the capital, offers a programme of its own. Sigulda Thrills! features events taking advantage of the city's incredible landscape, Olympic medal producing luge and bobsted track and other winter joys, stunning medieval castle ruins and breath-taking nature.

The Rīga and Sigulda programme in the cultural spotlight of Europe this year is truly diverse, with something for everyone. Come visit in 2014, we're sure that the programme has something for you too! ■

For a full programme and more details please visit www.riga2014.org

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# Finnish-Russian innovation cooperation – growing on

Expert article • 1504

**Finnish and Russian innovation actors are increasing their cooperation, especially in the startup sector.**

Russia´s innovation ecosystem has made a remarkable progress in the last few years. According to the recent review "Russian and global venture markets in 2007–13", the record-breaking volume of deals has put Russian venture market to the second place in Europe and as fifth largest in the world. In the same time, venture investments in Russia start to show early signs of maturity: while exits are relatively few, the most developed market segments, such as IT, rely very little on public funding. Supernovas of Yandex and Mail.ru listed at Nasdaq and LSE, have become familiar to a foreign investor's ear, justifying local market as risky, yet exciting. This would not have been possible without government-induced infrastructure and funds.

Russia's evolution in terms of innovation, startup and VC market was not left without a notice from Finnish public organizations, investors and private entrepreneurs. Finnish innovation ecosystem actors made their first steps on Russian ground already in 2009, with FinNode (former global network of Finland's innovation centers) and Startup Sauna (publicly funded startup accelerator, placed in Aalto university) being the pioneers. Now we can witness the role of Finland as Russia's innovation partner being solid and growing.

### Team Finland brings together Finnish actors

At the core of Finland's cooperation model lies Team Finland concept, which brings together key actors in promoting the brand and interests of Finland abroad. What comes to innovation partnership, Tekes – the Finnish Funding Agency for Innovation, serves as Team Finland outpost in Russia and an access point for Russian companies and research organisations, willing to contact Finnish R&D&I ecosystem.

Tekes puts high priority on regular foresight of major global and local technology, innovation and market trends in a process called Future Watch. The knowledge obtained is then available to all interested Finnish companies, seeking background materials for planning future strategies. Team Finland Future Watch network covers USA, China, India and Russia. Tekes welcomes local experts and "think tanks" to participate in foresight activities and exploring new foresight techniques to evaluate disruptive trends relevant for Russia.

A good example was a project in municipal solid waste management in Russian megacities. In this study a classical desk study was combined with interactive expert brainstorming in Moscow and St. Petersburg to produce a map of future, reflecting collective views on the problem development. Tekes is looking forward to continue this successful experience with involvement of its Russian partners, such as Skolkovo and RVC, actively using foresight tools to formulate their strategy.

### FASIE and Skolkovo the main Russian partners

Beginning from 2011, Tekes runs collaborative funding program with Russian FASIE fund, supporting joint R&D&I projects of Finnish and Russian SMEs. Aiming to accelerate cooperation between Finnish and Russian innovative companies, Tekes has announced its partnership agreement with Skolkovo Foundation in 2013. Skolkovo is Russia's flagship initiative in funding and supporting domestic startup and venture capitalists community. The partners contemplate the program will provide substantial financial and networking opportunities for Finnish companies and Skolkovo residents to venture into joint development of innovative products and applications.

Team Finland also supports domestic VC community in developing Finland-based business of hi-tech innovative companies originating from Russia. Vigo accelerator program, launched by the Finnish Ministry of Employment and Economy in 2009, has proven to be very successful in utilization of mixed public and private funding to accelerate growth of internationally-focused hi-tech startups. In addition to 10 existing accelerators, Vigo announced the launch of a brand new Russia-focused accelerator Helsinki Ventures at the end of 2013.

### Slush and Startup Village conferences driving active cooperation

Finland is no more a "terra incognita" for Skolkovo, who's over 1000 residents represent crème of the crop of Russian startup community. Internationally acclaimed Finnish concepts of Startup Sauna accelerator and Slush startup conference have attracted close attention of Russia's major innovation ecosystem actors – Russian Venture Company and Skolkovo. Both are now regular participant to Slush in Helsinki, occupying some of the largest areas for their delegations at the show. Result of Slush, Russian venture capitalists began to develop their taste for Finnish startups: recent investment into a Turku-based mobile analytics startup Walkbase would be a nice example of that.
In Russia, on the other hand, these successful Finnish concepts were taken as example to create Startup Village – the country's major startup conference. Hi-tech companies from Finland are now becoming regular participant to the Village, accompanied by Tekes and other Team Finland partners, as one of the objects secured in the agreement with Skolkovo.

After all, it is not accidentally that in 2013 Finland was nominated a partner country for the 2nd Open Innovation Forum – Russia's major discussion platform, dedicated to emerging technologies and furthering innovation prospects and collaboration worldwide. The forum, which typically hosts an international mix of entrepreneurial superstars, high-profile governmental authorities and young innovators, this time was attended by a large Finnish delegation led by the Prime Minister Jyrki Katainen. Team Finland in cooperation with RVC,

has brought to the table the topic of *Demand and user-driven innovation policy.* This new and more pragmatic innovation policy model pioneered, among others, by Finland, is of particular interest in Russia.

In conclusion, we may summarize that Finnish-Russian cooperation in innovations paves its way in right direction and with visible pace. In an opinion shared by Finnish economists, economy growth with innovations is not a matter of hunting flashes of wit, but systematic target-oriented work, based to continuous learning. Both Russia and Finland seem to share the same principles of support for innovative companies, and, more than that, exchange ideas and benchmark best practices from all over the world. ■

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# Finnish technology startups and traditional manufacturing industry

Expert article • 1505

**What's all the fuzz about?**

Word on the street says that big corporations are letting people go, SMEs are hiring. The key to our future success lies within the SME sector, they say. Some even say it's not enough to be a growth company anymore, now you've got to be a gazelle company, faster in growth and faster in generating revenue as well as creating new jobs.

Structural change is hammering the Finnish economy. It has been doing it for a while now. Our competitiveness is falling due to high manufacturing costs but also, and perhaps even mainly, because the products we're producing aren't hot in the global marketplace. They use to be, but they're not anymore.

Service industry in Finland seems to be overrepresented, products and services are targeted to our relatively small home market and we lack direct export actions taken by SMEs. The wage bargaining mechanism is not the most flexible one, we need to extend the lifelong working periods, the municipal sector reform is still unsolved, and we haven't been able to open up the competition for the private companies in public sector. And so on… The list of challenges, maybe even problems, is long but not yet overwhelming. Can our startups really solve the problem?

**From Nokia to Supercell**

Nokia gave Finns their justification to be proud of Finnish businesses and Finnish products in what comes to international markets. I mean, there have been others before, during and after the Nokia era, but let's face it, Nokia mobile phones made us proud to be Finns in the business sense.

Nowadays, we're desperate to find whatever positive news of Finnish companies doing well in the global marketplace. Having said that, for some reason companies such as Kone, Neste Oil, UPM-Kymmene, Stora Enso, and Metso, just to mention a few, are not quite doing the trick for us. It is traditional manufacturing business and we all kind of feel it's important, but still it doesn't quite give us the same vibes as the tech startups do. This, in my opinion, is not a healthy way to go.

Nokia was a blessing for us, especially during the times Finland was going through when Nokia's phone business started to fly, but it also made us a bit picky. We do want to succeed, but it has to be in businesses suitable for our new way of thinking. No more traditional manufacturing, now it has to be something to do with electronic products and services or future technologies. Am I right? I believe we got hooked to the feeling of being the forerunner.

Our latest superstar industry – online gaming – got its new hero in mid-October 2013: Supercell's owners sold 51% of their shares to Japanese investors. The deal was widely considered as positive news. They now had wider wings behind their back to create more value and even more future success. And now the Asian market became more open for Supercell than ever before. This attitude is very interesting if you take a look at what the public opinion is when talking about companies such as Rautaruukki and their merger with the Swedes.

Now we're rapidly gaining that Nokia era confidence back again with Supercell and Rovio, and the whole gaming industry. This way of thinking, by the way, is unfortunately widening the gap between generations here in Finland.

**Role models**

However, these success stories are most welcome for us, and people who've been working hard to make it happen easily deserve all the compliments they've been given. It is also worth mentioning that an investment as big as 1.5 billion dollars has a great reflection effect to the society, local business life and startup companies in general. It is very important for the younger generation to have role models such as these in business. I'm happy to say that nowadays many business school graduates want to become startup entrepreneurs after graduating, when a decade ago they wanted to work for any of the multinational corporations. This has of course its pros and cons, but I'd say it is a very positive thing nevertheless.

**What should we do next?**

I believe we're now facing somewhat a turning point which will change the game permanently. On the same time, I'm hoping that we'd still be able to respect and support the so called traditional manufacturing industry which has been providing and will provide a big part of our wellbeing in the future as well. Structural change doesn't happen in a heartbeat. We have to have patience to do both, grow our startups and take care of and evolve the traditional businesses.

Perhaps the solution lies somewhere between as it often does: perhaps the big corporations and startups, gazelle companies and the gaming industry have something in common? I'm sure there are things to learn for both of them: startups are excellent in creating lean organizations, utilizing digital tools and they're agile, bigger corporations have heaps of experience, loads of knowledge and resources. And maybe, after a couple of years of separation, they can now find things to do together. ■

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ALEKSANDR LOKTEV

# Soft infrastructure for the innovative companies

Expert article • 1506

Quality of service companies in a particular local innovation market has traditionally been considered as an indicator of the level of maturity. There are not so many organizations in Russia that work in the field of provision of services to technology business; and, which is equally important, most of them are only "packaging" innovative projects to attract investment. Unfortunately, the level of quality of support makes us say: the word "package" in this situation becomes clearly negative.

Many "packers" help start-ups attract resources from investors at various stages: from pre-seed funds and business angels to venture capitalists of later stages. Consultants teach heads of start-up companies to communicate with investment fund managers, to prepare appealing presentations, draw charts for them and build financial models: but they are not engaged in the development of competencies of innovative business founders themselves. We have to admit that by using this approach, "packaging" companies only make a "wrapper" for start-ups, without paying attention to filling them. I am talking about teaching how to work with reports, teaching proper communication with an institutional investor, giving knowledge of marketing for innovative products and the culture of the technology business. Due to the fact that the psychology of heads of start-ups remains unchanged, it turns out that for the whole time of search for investors, entrepreneurs are called to play a role of company executives with a good attitude to corporate governance requirements and wishes of external investors. When the need to "wear a mask" passes, i.e. money is received; the investor realizes that in fact a team which he supported is not going to build their relations on the basis of the signed investment agreement. It always results in conflict: the team does not give the investor access to the agreed points of operational management, does not notify it about the most important events in the development of the project. Unfortunately, in most such cases conflict is unavoidable. This discredits the idea of the potential of investments in venture capital projects; which in turn results in non-core assets being afraid to enter the venture industry, decreases the activity of business angels and institutional investors. Ultimately, the private sector becomes uptight about promising technology start-ups.

I am sure that for Russia in this situation the most appropriate solution would be to rely on the support of incubation programs at education and research institutions: they can become centers of concentration of breakthrough technology start-ups created by teams of talented scientists. In contrast to "packaging" companies whose main income is success fee and the attraction of investment is the only and ultimate goal, incubation centers initially build start-ups with right "genetics", filling them with the up-to-date processes of corporate governance, technological and organizational development, supporting them before and after the first rounds of investment. The result of this work is the fact that the founders of technology companies will subsequently carefully observe all the rules of working with a professional venture investor. And the ability to work in a team with an experienced investor, using its experience and contacts in the market, is one of the key competitive advantages for a start-up.

It should be understood that such objects of the innovation infrastructure may become profitable organizations only after 5-7 years of operation; this means that it is hard to develop them with the support of private initiatives. Therefore, the government, represented by development institutions, is actively investing in the creation of business incubators, technology parks, technology transfer centers and engineering companies. Infrafund of RVC is actively supports incubation programs; our portfolio comprises several such projects, and even more are being discussed.

Of course, the Russian market has a sufficient number of bona fide consulting companies that provide their quality services, often in complex: for example, by providing legal support for a venture capital transaction or by helping to prepare a business plan. In this part of the infrastructure of the Russian venture market, another problem arises: these companies incur a deficit in financially reliable customers, as the majority of start-ups is not ready or does not have an opportunity to spend available resources for the purchase of such services. To solve this problem, government development institutions, in my opinion, should increase the number of available financial instruments to support innovative projects at the earliest stages. For example, targeted grants or investment at the pre-seed stage would be beneficial (USD 10,000 to 30,000) aimed specifically to the invitation of an experienced consultant. System support of projects ready to work with consultants will lead to the fact that at some point, when the number of start-up projects reaches a critical mass, the financially reliable demand for high-quality consulting services will be increased significantly. Automatically supply will be increased; quality players will come to the market. Then, we can talk about the formation of a stable and professional market for such services. ■

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ALEXANDER GALITSKY

# Public-private partnerships – fostering innovations in Russia

Expert article • 1507

Public-private partnerships are considered to be one of the most effective forms of launching innovative processes in the world. In Russia, at this stage of development of venture capital market, instruments as part of this format of cooperation are just emerging and being tested. Development institutions (RUSNANO, RVC, Skolkovo) trigger mechanisms of collective investment (in partnership with private venture capital firms, as well as business angels) in innovative projects.

Today we can say with confidence that these tools are based on the proper principles of supporting innovative industry and start-ups working in it. It is evident that the government itself should not finance individual companies; its main task is to encourage the development of the market. The main issue for a private partner is how to make a quality choice between innovative companies: on the one hand, to secure the highest rate of return on investment, and on the other - to reduce the risk of failure. Thus, a private player is aimed at the highest quality expertise for each project, the government -- at financial aid for the entire venture capital industry and macroeconomic indicators. And a public-private partnership is based on such separation of duties: the government provides the investor with a "shoulder" for investment (this is especially important to address the problem of underinvestment at the pre-seed and seed stages) in exchange for its competence in due diligence, selection of the most high-quality start-ups and support of these companies to grow them into real business. It is in this form that the idea of collaboration of the government and private companies has already been operating in Russia, but we must understand that this format of interaction will always be inseparably linked with the role of the government in the innovation market as a whole and in the incremental promotion of the market.

From a certain generalized point of view, the government serves to improve the lives of its citizens both in the short-term and long-term perspective: by managing the country's resources and budget revenues, including those from taxpayers. In this sense, we as Russian citizens must understand that funding of the construction of the Skolkovo innovation city or the support of breakthrough research in the field of private space represent a "loan" from our present and future pensions and our monthly income. But at the same time, such projects as carrying out fundamental and applied research, the transfer of the country from a natural resource economy to an innovation economy, are able to ensure the prosperity of the country in the long-term perspective -- and that is why the government supports new technologies that will revolutionize the national economy in 5-10 years. In fact, by playing "long-term" the government thinks of the higher level of income for our children and grandchildren, while private business or market leaders, concerned about their current well-being, would not pay enough attention to innovation and new technologies. Therefore, the initiative of the government in the area of qualitative transformation of the economic potential of the country – application of scientific achievements -- is critical. In some industries, such as new materials and energy-efficient technologies, the government should be a pioneer in the financial support of innovation to set an example for private business. Ultimately, private initiative must prevail over the governmental one, both at the level of investments, and the number of transactions.

However, the problem is that when taking a strategic decision about the future, the government may make mistakes. Misplaced priorities, sub-optimal funding scheme or irresponsible choice of private contractors and partners may lead to a meaningless waste of resources. Thus, people who lead such initiatives bear great responsibility. After all, private business will "believe" in support of innovation in any field only if it feels that the government is confident in this course. In my opinion, to achieve this, the government must, first, more quickly form the necessary legislation base for the formation of new high-tech industries, form a consumer market of innovative products and promote the growth of business initiative, including at the expense of intellectual migration, and second, be consistent and tolerant in the steps taken.

In the development of government support of innovation, Russia relies on proven Western practices, which is evidenced by the emergence of the development institutes, special economic zones, technology parks and incubators... However, when adopting such model to the Russian innovation industry, and in particular to venture capital market, the government still makes at least two fundamental mistakes. First, it expects quick results and gets "nervous" which makes it unable to act systemically. Hence a "passion" of Russian officials for individual instruments, both in the field of building the innovation ecosystem and in the field of creating programs for a public-private partnership. Second, the Russian government still fails to timely legally respond to changes in the dynamic high-technology market. For example, when people willing to invest their money in promising start-ups appeared in Russia, the government should have introduced for business angels or early investors tax reliefs on their investment income. There are a lot of such examples, and all they prevent the establishment of the "working" environment for investors, entrepreneurs and innovators. For example, another fine point: reporting requirements for companies that received funds under a public-private partnership in the form of grants or investments. Often, clearly defined expenses, which a start-up that received a grant can make, prevent a company from being mobile and changing the strategy of development depending on changes in its competitive environment or needs of its customers. However, the lack of control over the use of funds may result in fraud on the part of start-ups. One of the tasks of the government is to find a balance between "freedom" and "leash" for businesses that get support. ■

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ALEXANDER KHASIN

# MedStart – helping biomedical start-ups succeed

Expert article • 1508

Recently, much effort has been put into supporting biomedical start-ups in Russia. The governmental efforts have resulted in emergence of entrepreneurial activity in such a complex area like biotechnology. Five or six years ago, the most of research and development work remained behind the walls of universities and research institutes and their promotion was the task of scientists, the majority of whom were 40-50 years old. Today, there are many young people in Russia, who are willing to launch innovative start-ups, based either on their own developments, or on developments of their colleagues, acquaintances, etc. The influx of young people in this area is a crucial factor for the successful development of the sector. In this respect, there was a very significant positive shift.

However, the main problem of biomedical start-ups remains the lack of awareness among their top management of the real market needs, and the lack of access to decision makers and policy makers in the Russian health care industry, and most importantly in the health care industry of Western countries, where the main market for such developments is concentrated.

Russian health care industry is now focused on updating and creating advanced real assets, constructing and equipping modern hospitals and medical facilities, and in the next 5 years it is unlikely to pay attention to introducing national developments and promoting their generation. In many ways it is justified, as the governmental priorities are associated with provision of high quality medical services to the population. However, we have to understand that, in five or ten years, when the current need for a certain number of modern equipped hospitals is met, we shall have to deal with specific diseases that require introduction of new technologies, development of which must be started now. At the same time, the Ministry of Health has not yet proposed a strategy for development of the Russian health care system in terms of disease control, health services payment systems, etc. Moreover, Russian developers have no idea of such a strategy, while it is the key to the beginning of any new development.

It is even harder for Russian developers to reach representatives of Western health care systems, insurance companies, hospitals, and physicians.

Thus, one of the most significant causes for holding back the development of the Russian biomedical start-ups is their lack of understanding of the existing market needs. They develop products that they like themselves, regardless of whether these products are in demand in the health care industry.

However, it's not all there is to it. The fact is that the Russian biotech start-ups also lack the knowledge about the mechanisms of presenting their developments in the market, as the health care market is a very complex structure. It involves insurance companies that cover the cost of health services provided to patients within the approved standards of health care, regulators (the largest of which is FDA), as well as corporations and distributors that are primarily focused on profits. Finally, the role of physicians should be taken into account as well, as in provision of health care to their patients they use technologies and solutions the effectiveness of which is known to them by their own experience or by the experience of their senior colleagues. We should also take into account the position of opinion-leaders who are popularizing a particular treatment method or a particular product. Thus, there are a great number of influence agent groups in the health care market. Any start-up presenting its product in the market has to find a special approach to each of them. In other words, a leader of the health care start-up has to understand, who will pay for the product developed by the team, and who decides on its admission to the market. There are also many intricacies associated with the packaging of the product and cost of the drug, device or service. In fact, only a start-up whose founders have long been present in the health care market and are aware of all its pitfalls will be able to choose the right business model. There are very few such people among Russian startupers. As a rule, innovative businesses are started by young people who are not necessarily physicians (but programmers, engineers or chemists, for example). Therefore, it is vital for them to be able to get the industry expertise and ties in both local and foreign markets. This can be done only by making contact with decision-makers in the health care market, but it is extremely difficult for a start-up seeking for answers to its questions to reach them on alone.

The association of health care startups MedStart strives to solve this problem. Addressing market experts not on behalf of a start-up, but on behalf of the association, the heads of innovative companies improve their chances of success. And this gives start-ups an opportunity not only to define the scope of application of their technologies, but also to formulate technical specifications for their product that will be able to meet the criteria of health systems in the specific markets. At early stages, this information is likely to be the most important for start-ups, and even more important than their financial resources themselves. After all, business leaders must clearly understand what kind of return they can expect from each attempted step, otherwise their money will be wasted.

Today, MedStart operates as a communication platform for the exchange of experience and contacts between companies, developers, and entrepreneurs in the field of high-tech medical technology. Following the two conferences held last year that have gathered more than a hundred representatives fro, start-ups, we have understood that Russian businessmen are willing to share their failures, and give specific advice to their colleagues.

In the coming years MedStart is going to build a partnership with one of the development institutions or business incubators to be able to take more efficient steps to develop the market of biomedical start-ups. A community of foundations and business angels ready to support biotech companies will be formed around MedStart. We are also going to involve public organizations and large distribution networks in cooperation. ■

Photo by Finam FM

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ALEXEY KOSTROV

# Moscow Seed Fund – increasing start-up investments in the region

Expert article • 1509

In recent years, the Russian government is focused on innovations. Its efforts are most evident in Moscow, a city especially "difficult" for innovative companies because of expensive offices, long distances and high labour costs.

The Moscow Seed Fund started an investment loan program for start-ups in the middle of 2012. Such mechanisms have already proved their effectiveness in Europe and the USA; therefore we have decided to apply the foreign experience to the Russian innovation system.

The Fund provides cheap loans to innovative seed and pre-seed projects supported by private investors having passed a competition. The main objective of this initiative is to support existing and to create new start-up investors in Moscow.

From the very start we wanted our program to be, first, maximally easy for the market participants (the requirements for the participation in the program should be transparent) and, second, fast implemented (quick decision making is important). I should say that we have managed to stick to these principles.

As mentioned before, the investors are selected by the Fund through a competitive process. We have held 2 competitions already. The investors working with us include well-known business angels and venture funds focused on start-up projects. Today there are 20 investors (8 individuals and 12 funds, 2 of which are well-known).

An accredited investor presents us projects (a private player's investment limit is RUB 20-30 million), which we might co-invest up to 200% of the amount already invested. The investor and the Fund own corresponding ownership interests in the project, proportional to their investments. The Moscow Seed Fund provides a loan at 1.5% of the refinance rate. After the loan is repaid, we transfer our ownership to the company's team. Other possible scenario: the loan could be repaid by a private investor, so that our ownership interest passes to such investor. The repayment period is three years: first two years are free from any repayments, but during the third year (provided that the start-up is mature enough) the repayments should be regular.

The average value of companies we invest in under the Fund's program is RUB 30 million. We clearly understand that we are at risk of a situation when the value of our ownership interest might be nil. In other words, if a project fails, the Fund suffers losses. But the "educational" aspect is more important to us – the loan program forces businessmen to be more disciplined; the directors of start-ups clearly understand that the investment loan is not a donation but a legal deal (we sign a loan agreement and a collateral agreement with start-ups). Additionally, we demand quarterly reports from the companies in order to observe how they spend our investments.

We already considered 34 applications from partner investors and approved 22 of them. The selected projects will receive investments in the total amount of RUB 136 million (the investors' funds will be about RUB 50 million). 17 projects have already received loan tranches for the total amount of over RUB 79 million. The average shareholding of investors in a project is about 20%, and that of the Moscow Seed Fund is over 23%. And out shareholding is pledged, as we have no participatory interest in the investment targets and no control over them. We deliberately decided that our shareholding should not be more than 50% to increase the motivation of start-up teams.

At the current stage, we consciously shift the program focus from directors of start-ups to investment partners, because we want new start-up investors to enter the market.

I am convinced we will not stop at what has been accomplished and will broaden the range of interaction mechanisms with both funds and start-ups, including, among others, the acceleration loan programs as a platform for private partners; on our part, we are ready to provide winning start-ups with additional financing (in exchange for a share up to 5%, like accelerators do today). We are actually interested in such mechanisms - thus we are open to offers from the market stakeholders. ■

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ANASTASIA TYURINA

# Sustainable development of Russian technology parks – next step in the way

Expert article • 1510

Only for the last two years, over 100 new business incubators and technology parks were opened in Russia: urban, regional, at universities and even colleges. But now, when these objects exist, it is time to deal with a range of services, customers, to understand how to make business models effective.

According to the survey of managers of 45 existing technology parks conducted by the National Research University Higher School of Economics (HSE) as part of the program for the development of competencies of infrastructural innovation employees implemented in cooperation with RVC, one of the problems is the lack of space occupancy. The main reason is the lack of the required number of innovative enterprises seeking to become residents of the parks. The thing is that in the "chain of innovation lift" a technology park is designed to help companies that are actively expanding sales markets, enhancing their production by providing appropriate business consulting services, expanding a network of business contacts, organizing exhibitions. However, the situation is that the vast majority of start-ups at best is developing and testing prototypes and is not ready to enter competitive markets. The universities, at which more than half of the parks are established, also do not represent "providers" for innovative business companies.

Only for the last two years, over 100 new business incubators and technology parks were opened in Russia [...] But now, when these objects exist, it is time to deal with a range of services, customers, to understand how to make business models effective.

Another important problem that has been mentioned by all government organizations of the infrastructure is excessive bureaucracy of their activities: inability to obtain additional income, non-market wages of experts, and delays in preparing accounts. To be more effective and more flexible in the organization of consulting services, incubators and technology parks have to become "normal" business entities: in order to get in them, start-ups should undergo a natural selection. We believe that the basic condition for the development of infrastructure is to ensure the stability of a business model of an incubator: it is necessary to exclude the dependence on a single source of income - budget (municipal, regional), to learn how to pay for current operations at the expense of lease the cost of which will be proportional to the real benefits for resident companies. Obviously, the quality of the consulting services is directly dependent on the professionalism of its employees.

Understanding these problems, the Higher School of Economics holds regular workshops for employees of business incubators and technology parks. For the fourth year in a row the key event of the program has been the Summer School HSE{SUN}, sponsored by RVC. The main benefit of the participation in the School is the promotion of the best practices of counseling entrepreneurs, and productive networking for those who want to learn how to professionally manage the work with residents. This year, the School was attended by 50 people, including the representatives of the innovation infrastructure which participated in the event as speakers. Interestingly, the School was attended by representatives of 25 Russian regions, as well as their colleagues from Ukraine, Kazakhstan, Finland and Italy.

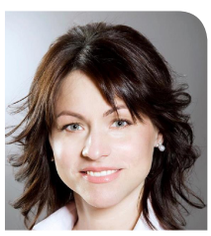
For the years of its work, HSE{SUN} has become a platform for the exchange of experience among business incubators, educational centers and other organizations. During several days, the participants receive practical tips on working with small businesses from the most respected experts and super-busy business consultants, which it is almost impossible to gather throughout the year as part of Moscow events. Traditionally HSE{SUN} is a visiting school held in the Moscow Region, where people (including venture capital investors or representatives of Development Institutions) come for a few days to get rest from the normal rhythm of life and devote themselves to communication with colleagues from regions, discussion of the mechanisms of development of the business environment which contributes to the development of new businesses. Thus, we achieve "full immersion" not only for students, but also for speakers. Many of the participants call our project "business rest": they come to recreation houses which we rent for HSE{SUN} together with their families (including children). All this creates a special "home" atmosphere of the summer school, which is the most effective for the establishment of professional contacts in the business environment. The eventful informal program, active recreation and friendly communication also contribute to our goals.

It should be noted that the format of the summer and winter country "schools" both abroad and in Russia is extremely popular. Unfortunately, not so many events for technology parks' experts are held in Russian regions, and for our regional colleagues HSE{SUN} is a desirable event where they are able to get the integrated data on best management and counseling practices in one place. Moreover, our task is to involve colleagues in the discussion of their current operational problems, to encourage them to not hesitate to ask questions, to dispute and talk about themselves. After each block of "lectures"

(40 minutes on the average), students may ask an expert questions. Almost all dinner time or evening walk time may be devoted to that. The program of HSE{SUN} is very intensive: 10-12 hours of active work every day; thanks to the fact that theory and practice are combined in a 50/50 ratio, time passes very quickly.

So, the school program is designed in such a way as to give participants a chance to share their own problems and to find the most effective solutions. Coaching sessions are devoted to training participants in the *technology of building a business* of an infrastructure organization. Today it is clear that Russian technology parks and incubators need sustainable business models; they need to learn how to become a real business. Thus, we tell our students how to earn money by providing consulting services, how to select residents, how to organize the effective work of a management team. We also study the mechanisms of working with government agencies, the technology of introducing mentoring support for start-ups, new forms of educational and business events.

I think that step by step we will generate systemic view of representatives of incubators and technology parks in respect of the innovation economy and will make them think about the role of each element of the innovation ecosystem in the development of the Russian economy as a whole. We truly believe that by combining efforts and expertise, we can more effectively develop successful companies in the field of innovation that will be competitive on the global market as well. ■



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ANDREW VVEDENSKIY

# Innovation infrastructure as the key element of sustainable venture ecosystem in Russia

Expert article • 1511

Infrastructure is part of supportive environment forming the background for the national innovation ecosystem. By now, the country's innovation infrastructure has already taken shape, but it faces some "distortions" that are inevitable at the very first stage of the innovation economy development where Russia is now.

The key elements of the Russian infrastructure are the following:

1. University infrastructure (business incubators and business accelerators)
2. Technology parks and industrial parks (industry, university, and municipal ones)
3. Clusters (industrial and territorial ones)

Unfortunately, the quality of management in the key elements of infrastructure (technology parks, business incubators, etc.) leaves much to be desired. Management teams lack knowledge, skills, and resources necessary to build an effective operations and attract investment (venture capital or direct ones, or these from business angels). There are virtually no technology entrepreneurship training programs, so today's lack of qualified personnel combining technological skills with the skills of business administration and sales of innovative products is one of the key problems of innovative companies. In addition, many technology companies have difficulties in understanding current trends of the target markets. This often results in choosing a wrong technology or product development strategy, and reduces their attractiveness to investors. Russian mentality makes things worse - we do not learn from the mistakes made, and we give entrepreneurs no right to make mistakes. However, we must understand that, unfortunately, no innovation can be created and introduced error-free.

Another problem is the lack of funding by private organizations of all the elements of the innovation development infrastructure. There either no mechanisms to launch self-financing programs and initiatives or they lack systemic structure and approach. Predominantly public financing of infrastructure is not sufficient to run and operate such processes - it just gives an initial push. This reduces the efficiency of the budget funds use.

RVC actively engages in development and improvement of the existing innovation infrastructure in joint effort with other governmental development institutions, as well as federal and regional authorities. One of the main tasks is the radical increase in efficiency of the existing innovative infrastructure - special economic zones, technology transfer centres, business incubators, technology parks, etc. Any infrastructure company must clearly understand what tools it can apply to improve the efficiency of its business. To reach this, we need to share knowledge and experience with the infrastructure managers and replicate successful practices of our colleagues who have already achieved the desired results.

The most effective elements of the innovation infrastructure in Russia, at the present stage of its development, are naturally existing regional competence centres - clusters. It is them that are fully integrated into the market. We plan to continue to provide financial, administrative, and infrastructural support to both the formation of new clusters, and promotion of products of Russian clusters in the national and global markets. With the use of public-private partnership mechanisms, a large number of service companies for innovative businesses has been created - both cross-industry (eg, services for protection of intellectual property rights) and industry-oriented ones (eg, service companies engaged in pre-clinical testing of medicinal products). This is also an example of in-demand governmental initiatives in the field of building the infrastructure.

Russian technology parks, in contrast, have trouble finding interesting residents, skilled managerial staff, and effective monetization models. There are few examples of successful private technology parks. Their experience is poorly studied and is very little shared. Nonobvious prospects of investments in technology parks lead to the fact that such investments do not generate any interest among private businesses. That is why there is practically no private investment in this area, and as a result, technology parks are hardly developed. It is the development institutions - both national and regional ones - acting as governmental tools involving cooperation in private business and broadcasting the priorities of the government that should be the initiator of addressing the problems of improvement of the effectiveness of certain elements of the innovation ecosystem.

An innovative economy is basically not possible without an innovative government. It is also important to note that, in addition to the regulatory function itself, the government plays several important roles in the economy. First, it is a supplier of various public services for both individuals and legal entities, and the quality and speed of their supply determine many socio-economic parameters - from the mood of individuals to the business environment. This is the area where it has long been necessary to apply organizational, administrative, and technological innovation. Second, the government is the largest "consumer" of goods and services, given the impressive size of the public sector in the Russian economy. This means that the process of governmental procurement, at least in part driven by innovative products and services, will create a significant demand for the products of high-tech companies.

To create a comfortable environment for the development of innovative projects, the government is developing a number of programs. The state programs that have the greatest impact on achieving the goals of the innovation strategy are the following: "Economic Development and Innovation Economy", "Development of Technology Science", "Education", "Information Society (2011-2020)", as well as a number of other governmental programs for development of the

industry and high-tech economy sectors. As of March 30, 2013, the following governmental programs have already been approved: “Information Society (2011-2020)”, “Development of Nuclear Industry”, “Governmental Program for Development of Agriculture and Regulation of Markets of Agricultural Products, Raw Materials, and Food”, “Development of Education”, “Development of Science and Technology”, “Development of Pharmaceutical and Medical Industry”, “Development of Electronic and Radioelectronic Industry”, “Development of Health Care”, “Development of Shipbuilding Industry”, “Development of Aviation Industry”, “Development of Industry and Improvement of its Competitiveness”, “Environmental Conservation”, “Russia’s Space Activities”, “Economic Development and Innovation Economy.”

The government should not be complacent in supporting Russian innovation infrastructure. It is obvious that mistakes are inevitable, but one should draw conclusions about the validity of the processes and assign corrective measures only after any specific, measurable, and analysable results are achieved.

It is clear that the key to the success of the governmental support to the innovation ecosystem elements should be the well-coordinated work of development institutes. Today, participants of innovative processes (developers, entrepreneurs, and investors) are often lost in the intricacies of requirements and regulations of various development institutes. The development institutes should be a multifunctional tool of governmental support that is implemented as a variety of tools for specific cases. ■

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ARTOUR BAGANOV

# Surviving the "Valley of Death" – start-up acceleration programs

Expert article • 1512

In recent years there seems to have been an exponential rise in the number of accelerator programs offered for aspiring entrepreneurs. This increase and the amount of money being invested in them is a positive sign as new startups are an important driver of economic growth. Certainly no accelerator provides a guarantee to success, no accelerator can save a bad idea or a bad entrepreneur; but the best accelerators can make good ideas better, making beginner entrepreneurs more confident and smarter. An accelerator is about adding value more than anything else.

Even though there has been an explosive growth in business accelerator and incubator space, for Russia this is still a relatively new concept.

The Russian venture capital market can be compared to a building, whose shape should ideally look like a pyramid. This means that if we want to see a superstar tech company at B round we've got to have 10 thousand startups at seed stage.

This is clearly a challenge. A typical first VC round starts with investment of $1-3M meaning that the company must be mature, or at least having survived the death valley already. In Russia we can literally count such companies on one hand. Generally out of a thousand startups only a couple will survive the valley of death. In Russia specifically there are very few guides who can navigate entrepreneurs through this valley – the funds do not have the capabilities and the time to do so as their business model is just not build for this. Thus incubators and accelerators provide great value not only for startups but for the whole ecosystem with the role to create sustainable pipeline for VC funds.

One of the challenges here is mentality of many Russian accelerators, which is that of an investment fund and not a service company. While accelerators and incubators are not investors, they are in fact in services business! They do not think in terms of who will be the next round investor, but simply select the startups they like. As a result we see situations where there appear seven Russian clones of Square at the same time, as happened last year. Accelerators thought this was a great concept, great product and even the implementation was quite decent, they should go for it! But when the time came to raise venture capital it turned out that every active fund had their own version of Square in their portfolio already.

What I mean here is that the value chain is broken – there is no sustainable link between angel/seed stage and venture stage.

The VC funds will not go to the seed stage as investment risks are extremely high. But they do need a healthy pipeline. This is a challenge every investor is trying to address today. In the West the death valley is survived with the help of accelerators or sometimes angels. In Russia we do have elements of an ecosystem but the coverage is insufficient and the links between them are very loose.

At Global TechInnovations we launched a model aimed at bridging this gap – GTI Labs accelerator that was focused on filling pipeline needs of different venture capital funds. It resulted in having better odds both for the startup and the fund. In our program 50% of the graduates raised first round from partner VC, which is a very good success rate.

Strange as it may sound California is facing similar challenges, i.e. weakening dealflow but for different reasons. Some of the main reasons are emerging super-angels, frictionless/viral information exchange, some inertia among VC firms, and distrust to VC in general. Thanks to social media it is now easier than ever to monitor the startup market and to snatch the good ones before they reach classic VCs. Quite often it is done by super angels – self-made tech entrepreneurs who speak the same language as entrepreneurs, attend the same events, drink the same beer, and listen to the same bands. And they have quite similar financial capabilities as VC firms. Guess, what is the tech entrepreneur's first choice for an investor? On top of that there are other services, such as AngelList, that boost the chances to raise venture capital by reaching out to the whole ecosystem. It is not a secret any more in California that the VC model is broken.

For Russia this is actually good news – our venture capital market is not that far behind in terms of facing the same challenges. To address them in both cases we need smart accelerators that do not operate in isolation from VCs but rather hand-in-hand with the investors of the following rounds.

We believe accelerators will continue to thrive and the overall trend is rather positive.

The biggest challenge now is to find a sustainable financial model for an accelerator. The major players on the Russian market, that have been in this industry from the very beginning, have made quite a few experiments with the first success and failure stories and we all look forward to seeing how it all evolves. What we need now is the strategy – the "what" to do next, and the "how" will come. ■

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# Towards a smarter planet

Expert article • 1513

IBM engages with a new generation of entrepreneurs to meet the challenges relevant in any country worldwide. These challenges include transportation, power sector, healthcare, environment, and welfare which directly affect the life quality and level. This IBM project is called Global Entrepreneur and includes many initiatives aimed at startups across the globe. We bring together collective knowledge and expertise of world-class mentors for intense workshops, networking and sharing professional data. Our hope is to help young entrepreneurs to bring their groundbreaking technologies to market faster and succeed globally.

IBM expressed its intent to work with innovative hi-tech startups in Russia at the 2012 Open Innovations Forum. At this Forum, IBM declared its Global Entrepreneur program to be launched in Russia together with RVC. The program will grant startups and new projects free access to IBM's software and hardware and expert advice.

Why did IBM select RVC as its partner to launch Global Entrepreneur program? This proves to be our most logical step. By the time when the program was launched in 2012, RVC had been long and successfully involved in building Russia's innovative ecosystem. IBM decided to join the existing market mechanisms rather than reinvent "its own wheel."

Partnership with RVC enabled IBM to bring in the most ambitious teams and make the most of its exposure to the Russian innovative community.

It took us several months to process applications from startup teams at the company's website (several hundred project descriptions were received). Five IBM Global Entrepreneur finalists were qualified to participate in the 2013 IBM SmartCamp session held in June to bring together the most advanced IT companies, which had come to the attention of IBM during the Russian stage of Global Entrepreneur. On the Day of Mentor session, 25 industry experts, including IBM CEOs, members of American and Russian venture funds, legal experts, successful entrepreneurs, academics and IBM's business partners, discussed the projects selected for the Russian finals. Expert teams of five members each reviewed the strengths and weaknesses of each of five finalists to assess the technology underlying the project, help startups to "polish" their business models and advise on the best policies to land customers. The next day, the participants held an open project contest, round-tables and panel discussions addressing growth prospects of Russian entrepreneurship and development of tools to enhance quality of Russian startups. SniproTEK, a limited liability company from Nizhny Novgorod, was named the winner of the contest. Their solution for the oil and gas industry will represent Russia at the IBM SmartCamp regional final in Istanbul in late October.

I believe that the "backstage" work of experts proved to be the core underlying element of IBM SmartCamp. We enjoyed much positive feedback from the startups which were happy to get mentors' advice, including top venture funds, industry experts and IBM team. Most entrepreneurs agreed that IBM SmartCamp sessions proved to be intense and insightful.

IBM views its work with the strongest teams (like the teams which emerged as IMB SmartCamp finalists) and support to early-stage startups as the core element of the IBM Smarter Planet concept. IBM is seeking to offer innovations for business leaders who favor new breakthrough solutions over standard tools. IBM has a global aim of encouraging a paradigm shift by using analytical capacities of today's computers to yield benefit in real economy and forecast events rather than taking the dust.

We referred to this idea to select the projects for the IBM SmartCamp session. Our attention was focused on companies actively engaged in developing a software-based product or service for enterprise customers and viewing innovation as an opportunity for forward-thinking and preferring to anticipate rather than react.

One element to build a Smarter Planet is Smarter Analytics which enables businesses to make efficient decisions and automate most routine processes. Information and communications technologies generate big data even today; and we are looking for new options to use such data. We need systems capable to expose consistent patterns based on the existing statistics which places major emphasis on data source structuring. This allows us to run analytics without which companies may drown today. IBM is independently moving along this vector by making annual investments in R&D. Anyway, we feel happy, if IBM projects complement solutions of the most advanced teams whose progress in any given industry has proved to outstrip our own.

Sinesis, one of five contest finalists, is focused on developing video analysis software for industrial use. This development was presented last spring in Skolkovo Startup Village and got positive feedback from experts for its capability to track any process in the company, whether car service employees' performance or monitoring movements of retail outlet buyers. Sinesis works on algorithms to process video information for practical industrial application. Sinesis services may further become the basis for analytics underlying employee training, efficient display of goods in shopping centers and many other uses.

IBM has been working in the digital video surveillance sector and offering solutions for industrial safety, therefore, we took interest in the product proposed by Sinesis. Let me emphasize that we value no so much compatibility of any startup's products with IBM products (for example, Sinesis uses no IBM's video cameras – we manufacture no video cameras – as our underlying hardware platforms and software mostly use open codes) as future vision affinity between a startup and IBM. This may be a good basis for cooperation between such startup and IBM to bring their solutions to market.

This is just an example of how innovative project support may boost IBM's ability to enhance the growth rate of its own technologies. Not only does IBM SmartCamp encourage startups in promoting their developments, it is also a great chance for them to become exposed to the global community. In the context of general innovative growth in Russia, IBM's support as a market player mostly focused on B2B customers gives some kind of "weight" to Russian startups which frequently focus on developing "entertainment" services for mass market.

Alexey Anikin, IBM strategy leader in Russia, shares his observations as IBM SmartCamp expert:

"We have set up a brand-new Internet shop, business management system, a social network and updated 1C, SAP and Oracle." Anyone who happened to come across a startup had heard dozens of similar statements. Do they have any inherent good idea? Or a business plan? Or any meaningful strategy to tap the international market? I believe the answer to these questions is only evident in most cases. Being part to the startup selection process as a strategy leader, I became aware of a disease prevailing among startups, i.e. too technical and programmatic approach to work. The product is everything; and its marketing strategy or competition policy makes no matter.

This was the main reason why we have selected only five companies of hundreds applications, although these companies enjoyed the maximum attention. Totally, 25 Russian and international experts (in teams of five experts and in several one-hour rounds) helped to think over company's growth strategy, its prospective cooperation with IBM units and other companies, adjust business plans and discussed investments and legal matters vital for international market exposure.

As a participant, I would like to emphasize an atmosphere of trust and goodwill at the event. IBM SmartCamp Mentor Day was held as an open and friendly discussion, rather than "mentoring" lessons or an opinionated lecture on the perfect way to set up a business model. Hopefully, such upcoming IBM SmartCamp contests in CIS and Russia in 2014 will be no less interesting. I urge startups to participate in our contest!". ■

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# Developing Russian venture industry

Expert article • 1514

Speaking about the specifics of innovation development in Russia, one should bear in mind that market economy in our country is in its early twenties, while the first "civilized" transactions were concluded ten years ago, and the venture history is no more than five years. The first venture capital investors appeared in Russia in the mid-2000s - Finam, Russia Partners, and Mint Capital. Intel Capital, Draper Fisher Jurvetson, and Baring Vostok Capital Partners also came to Russia. At the stage of building the market, there were dozens of companies attracting venture capital investment during annually. The portfolio of the first active venture capital funds included the companies that are now known worldwide - Yandex, ABBYY, and Kaspersky Lab.

This was followed by the stage of rapid growth - the number of venture capital transactions increased more than fivefold annually. In 2009, the official statistics on the venture capital market has registered eight contracts, in 2010 there were more than 50, and in 2011 there were about 150 contracts. Following last year, numbers of start-ups that have received venture financing reached 500 with the total volume of transactions reaching the level of 1 billion U.S. dollars. I am sure that the pace of development of the Russian venture industry will not decline, and in the coming years we may "catch up" with many European markets, Israel, and even the United States.

Runa Capital Fund was launched in Russian market in early 2010. There was virtually no competition between Russian innovative start-ups at that time (I'm talking mainly about IT-projects, as the scope of our interests is software, Internet services, and mobile applications). We felt extreme shortage of venture capital at the seed stage - start-ups had to "grow" to the stage of the first sales to bring attention of venture funds.

In 2009-2010, the government has seriously gone into development of the "seed" investment market. There appeared organizations giving grants to start-ups. The Fund for Assistance to Small Innovative Enterprises became active, in particular. The concept of Skolkovo Innovation City and the Skolkovo Fund has been formulated (the main goal of these projects was promotion of technological entrepreneurship), and the venture capital funds established by RVC began supporting start-ups. The result was the first success stories. Mass media started to write about companies that have attracted 1.2 million U.S. dollars at the start-up and early growth stages. These companies were spoken about at start-up conferences as well. Russian youth began to think that they can make money not only gambling on stock exchange or having achieved a high position in a bank, but also by developing their own technology businesses.

Gradually, there appeared a "fashion" for innovation in Russia. A few years ago, following the slander of the Soviet past, the Russian society treated entrepreneurs as speculators. People did not see an entrepreneur as a positive image of a person who changes the world to the better. Today, many college graduates see themselves not only as government officials, lawyers, or financiers, but also as heads of their own start-ups. It was properly structured communication between the government and society that helped young people to change their attitude towards entrepreneurship and to see it as a form of personal fulfilment.

In many ways, the emergence of positive features in the image of a businessman is due to appearance of the Russian IT-industry heroes - Arkadiy Volozh, Sergey Belousov, Evgeny Kaspersky, and David Yan became the embodiment of the new economy entrepreneurs able to earn millions of dollars by bringing their own developments to market. The news about big IPO of Yandex contributed to the popularity of these names, when the first 17 employees have earned several million dollars in one day. Then young people understood that one can be successful in the technology business not just by creating a start-up, but also by joining it in the early months and years of development and having received stock options (this is the main form of compensation of start-up employees' work). Thus, the high-profile success stories have attracted active youth into the venture capital industry.

At the same time, money flowed into the venture market, and now we see the very rapid growth in venture capital investments in high-tech industries. But the number of start-ups in the Russian IT-market does not meet their quality due to overabundance of money in the seed market. This is largely due to the emergence of non-core players in the market - investors supporting lower level projects due to the lack of the appropriate level of expertise. This gives unreasonable expectations to start-ups in the market. In fact, to raise money at an early stage, a start-up may not even have a prototype - all you need is to be able to draw a nice "picture" of the future prospects of your product. Of course, this method of persuasion will not work with the investors that have been long present in the venture market, but beginners are often willing to invest in such start-ups. Russia remains a country of talented programmers and the best Russian projects are not inferior to the best foreign start-ups. But if we look at the situation as a whole, an average Russian project will not meet the level of the global requirements for a start-up.

I am sure that soon the grain will be separated from the chaff. "So-so" start-ups that have appeared in large numbers in Russia will give people the necessary business experience. And those who are building innovative business today will launch the next start-up after its completion (perhaps quite successful one) and will become serial businessmen. The main task now is to keep young people in the mood to be entrepreneurs and do not let them give up after the first (and quite probable) failure. ■

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# Biotech funds – achieving the maximum results

Expert article • 1515

80% of the Russian pharmaceutical market is a generic market; and it grows annually by over 15%. I wouldn't consider the fact that Russian pharmaceutical companies are not focused on original drugs as a negative thing, it is a viable business strategy. Not very active emergence of innovative products correspond to the current stage of the market development: it is mainly represented by pharmaceutical corporations (leading players are Pharmstandard, R-Pharm, Veropharm) which focus on "Over the Counter" drugs, common generic drugs and brand generics. Leaders of the Russian pharmaceutical market get a substantial share of income from the resale of original medicines under agreements for distribution or license agreements in Russia.

However, over the last few years new companies that are engaged in the development of unique products have been founded in Russia. Such companies are supported by venture capital funds specializing in pharmaceutics and biotechnology: our fund Bioprocess Capital Ventures, venture capital fund Maxwell Biotech and RVC Biofund, all with the assistance of institutes for development. For a long time, both areas have existed in the Russian pharmaceutical market "in parallel with each other": big players did not want to deal with innovations. Indeed, it is really difficult due to high costs of biotech projects. One million USD (as in the market of Internet start-ups at early stages) is not enough here to quickly evaluate a technology and a business model. An investor willing to invest in a medicine has to spend a lot of money on the initial investment in a project, but it gets the final idea of the prospects for development only at the stage of clinical trial. New pharmaceuticals undergo a long development cycle: 7-8 years and 5-10 millions of dollars are spent only to complete all molecule tests; and it takes about 10 years and tens of millions of dollars to bring a product to the global market (of course, due to such difficulties, innovations in the pharmaceutical industry are only created with a view to bringing them to a global market), to repeat tests abroad with the help of foreign R&D centers and clinics. In this case, investor's risks are quite high. No wonder that for a long time, only venture capital funds supported by government would engage in such a complicated business in Russia.

Yet gradually, two trends in the Russian pharmaceutical market are beginning to intercross: private biotech funds are being founded. Key players, in particular, Pharmstandard and R-Pharm, announced the creation of their own venture capital units. The fact that large Russian companies have declared their readiness to reinvest profit in the production of new pharmaceuticals clearly is a positive trend.

And yet, as a venture capital fund we feel that Russia still lacks high-quality projects in the field of biotechnology. Russian teams of scientists do not understand the process of commercialization of innovations; this is largely due to Soviet past and difficulties in the development of Russian fundamental science in the last 20 years. We must be honest with ourselves: young Russia has only taken care of preservation of the accumulated scientific knowledge and has not paid due attention to the development of new breakthrough ideas. Only in the last few years, we have engaged in restoring what we lost; and, of course, such an innovative scenario which lasted for two decades, have had a negative impact on the condition of the Russian pharmaceutical industry and science in general. The achievements of the Soviet medicine are currently being used in full: they either form the basis for products produced in European or U.S. laboratories, or are used by Russian pharmaceutical companies. To this extent, Russian biotech funds, that are willing to invest in "long-term" pharmaceutical projects, find in difficult to select companies for their portfolios. Among companies that we support, just one project created by Russian scientists is promoting a revolutionary concept. We are now conducting negotiations with two more Russian teams. The remaining projects are being developed either by Russian scientists who immigrated to Europe or USA 10-20 years ago, or by completely foreign start-ups that we brought to Russia. Our portfolio comprises 9 companies, 2 - chemical, 1 - telecommunication, 6 - pharmaceutical (4 of which are based on the IP of foreign experts). Thus, we as a biotech fund have to use both Russian and foreign innovative ecosystem: so and in no other way can we achieve the maximum results.

In my opinion, the efforts made by institutes for development in the field of innovation, of course, have been successful. Over the past 5-7 years, an entire innovation industry was created. However, without increase in support for fundamental and institutional science (the two main sources of scientific research for business) government support may not be enough. I think Russia should use such examples as MIT, and pass on the best practices that have already been formed in the leading universities such as MSU or MIPT. A more accessible system of grants for young scientists could prevent the brain drain and promote the growth of interest of those who now thinks of leaving Russia in conducting fundamental researches in our country. ■

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# Innovation ecosystem in Russia – entering the global competition

Expert article • 1516

Establishment of a national innovation ecosystem is traditionally interpreted as a result of measures carried out mainly by the government. As a derivative of the volume of public investment in the development of comfortable living conditions for "young" companies, of the volume of changes in the legislation, of the scale of promoting the ideology of business in society. However, a universal model of formation of the environment for innovation does not exist. This means that Russia's transition to a new stage of economic development means not only taking into account the world achievements, but also close attention to the historical specifics of the country and specific features of its economy.

Russia is a country with a huge research potential in the field of both fundamental and applied research. Indeed, Russia is one of the countries by which forces humanity committed technological breakthroughs; scientific and technical achievements of Russian scientists have become the basis for products and technologies used today throughout the world. A large volume of accumulated scientific knowledge is a huge advantage for Russia, which today participates in the international innovation race. Former Academic Towns, which began their work in 1950-60s, still remain the centers of concentration of talented scientists and high tech industries; Russian universities and research institutes still have a huge stock of intellectual property - and many scientific discoveries are applied today. This is a huge resource, which, if efficiently used, may help Russia create new competitive businesses in different sectors of economy.

However, most countries, that created an innovation economy in conditions of catch-up modernization, faced the opposite situation: they had a deficit of scientific developments, even though the process of creating technology companies was already well-functioning. In the end it turned out that most of the mechanisms established to promote innovation through world experience aimed at forming tools for business, ready to use technological knowledge, regardless of their source. In fact, the national innovation economy could be built on the developments received from non-residents. In Russia, such innovative scenario is impossible. In our country, the government's efforts in terms of stimulating innovation development have been for a long time aimed at creating and maintaining the system of production of scientific achievements. It cost Russia huge amounts of financial and human resources. The government did not simply have the strength to develop market-based mechanisms of work with scientific discoveries. This for many years has been the problem of the Russian Innovation industry. Businessmen and officials still think of the term "innovation" as of a designation of "commercialization of developments". In reality, "innovation" is not only "implementation" of something new, it is a mechanism for identifying the needs of the market and finding a way to meet them by using either existing or specially conducted scientific research. Such paradigm of the innovation economy is not yet clear in Russia.

Deficiency of tools for the development of business model of the Russian innovation economy has put domestic institutions for the development in need of active support of small and medium-sized companies, representing the most efficient structures in terms of creating an innovative product and bringing it to the customer. In recent years, the result of such efforts has become noticeable: in 2012, Dow Jones VentureSource Report recognized Russia as the fastest growing venture capital market in Europe, which made us fourth in terms of investment (the total amount of venture capital investment in the Russian market over the past year was USD 910.6 million). Bloomberg assigns to Russia the 14th place in the rating of the 50 most innovative countries in the world.

Accelerating the development of the Russian venture capital market opens up the possibility of active cooperation with international partners. Today, we can say that Russia has already developed an innovative ecosystem that corresponds to the world standard of its structure. Private and public structures for support of innovation at all stages of their development are functioning: from grants and microfinance for pre-seed and seed stages to the system of crediting large corporate projects. The existence of such an "innovation lift" allows Russia to invite foreign colleagues (both investors and representatives of infrastructure and public sector organizations) to work with the Russian innovative companies at all stages of their development. Together representatives of the Russian venture capital market and foreign partners will, for example, use the achievements of Russian science of the past and create innovative products for the global market on their basis.

At this stage, Russia has a lot of tools based on the principle of public-private partnership. In particular, the principle of co-operation of the government and business is embodied in the mechanisms of co-investment in technology start-ups. If in the past it was hard for foreign investors to work in Russia (they had to deal with a completely incomprehensible logic of innovation process), now our country provides for the opportunity to work according to international standards. Thus, the Russian innovation market opens up the possibility to use a huge scientific potential through clear "rules of the game". Russian investors are willing to co-invest with Western partners through subsidiaries of RVC JSC - industry funds to support innovation; Russian institutes for development are willing to help technology corporations look for early-stage projects with prospects of purchasing them: for this purpose contests for innovative projects are held (for example, contest "Business of Innovative Technologies" and contests of the Foundation for Assistance to Small Innovative Enterprises), and regional clusters are being developed. Even today, in the Skolkovo innovation center, R & D centers operate which were launched with the participation of transnational corporations; international players work with mature projects through funds of "RUSNANO". Today in Russia, there is a full range of practical tools that have proven successful in the world innovation practice, and Russia is committed to collaboration with international players of the innovation market. ■

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# Business of Innovative Technologies (BIT) – the largest innovation contest in Russia

Expert article • 1517

The largest Russian Innovation Contest - BIT (Business of Innovative Technologies) - is celebrating its tenth anniversary. The competition is based on the principles long adopted by its American partners - MIT $ 100K and MassChallenge. Just like them, BIT is not a contest of ideas or business plans, but it is a competition of technological teams. BIT first presented itself at the MIPT platform in 2003. Since 2005, Intel has been a partner of BIT (winners of the contest were given the opportunity to represent Russia at the IBTEC). Later on, it started cooperation with Plug & Play Technopark and BlackBox business incubator, as well as with the Finnish incubator FinNode.

The purpose of the BIT contest is to promote innovation throughout Russia and bring promising companies to the national and global markets. BIT participants are selected at several levels - first at the regional one (15 regional BIT competitions), where semi-finalists are selected, and then at the federal one in the final competition in Moscow. Over the past 2 years, BIT finalists have attracted 25,000,000 U.S. dollars in form of investments and grants. RVC is a strategic partner of the BIT since 2010.

The innovation infrastructure in Russia has been actively developing recently. However, while the number of venture capital funds, business angels, incubators, and technology parks in the country is growing rapidly, the number of high-quality start-ups is increasing at approximately the same rate and is not sufficient to meet the needs of Russian investors in high-quality projects. One of the most effective tools for creating new projects are competitions organized by universities, technology parks, etc., that is why RVC as a development institute is actively supporting many of them (about 1 competition in 2012).

Each competition has its own business cycle. As a rule, collection of applications begins in spring, and the results are summarized in autumn. BIT was an exception from this rule as the winners are already known by the end of June. This gap in competitive cycles has automatically made BIT a source of projects for other competitions. This is facilitated by the regional BIT model, when search and preparation of projects is done by representatives in the regions that are active participants in the regional ecosystems. As a result, we see the same teams taking part in most of the final competitions of technological projects. It turned out that those 10-15 start-ups that reached the final of BIT were brushing up their communication skills further from competition to competition learning to present their developments and communicate with investors. At the same time they often had very little time to improve their projects, which caused a corresponding reaction on the part of investors who lost their confidence in competitions as a tool for finding projects.

Earlier this year, we have analysed our activities in supporting competitions to find the way to make them more efficient and improve the quality of the end projects. We have formulated several major challenges:

1. Competition of contests
2. Number of projects suitable for investment
3. Monitoring competition finalists

In order to address these problems, we launched a pilot project based on BIT Competition in collaboration with the Moscow Innovation Development Centre and Digital October Centre. The new structure of the competition is as follows:

**1. Single competition platform**

- This year, BIT projects were collected not only in the regions, but also through askcap.ru, accumulating investment applications for funds. Thus, it was possible to significantly expand industrial diversification of projects and collect more than 1,500 applications, which is an absolute record for the 10-year history of the competition.
- Partners were given access to the project base. In particular, the opportunity to select projects to fit their own interests was taken by Intel, IBM, Kaspersky Lab, OMZ, and IcomInvest, which made it possible for them to optimize their spending on search and examination of projects.

**2. GenerationS (Generation Start-up) Educational and Acceleration Program**

- As part of the program, 70 teams of finalists will have an online course on technology entrepreneurship and will spend two weeks in Moscow in October, and will adjust their projects to the level of interest to investors together with experienced experts and mentors. This will increase the number of investment-suitable projects, which should have a positive impact on the investment prospects of the finalists in general.

**3. GenerationS Community**

- The final contest of the competition will take place in the framework of the forum “Open Innovation” on November 1, and this day will become for the finalists the beginning of a new life in the status of a member of the top Russian start-up community - GenerationS. This community makes us able to track the fate of the finalists, support them with the resources they need to develop, and form the Russian start-up community together. For community members, it is an opportunity to socialize, access investors, mentors, conferences, exhibitions, internships, and programs from our international partners. ■

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IGOR ROZHDESVENSKIY

# Business incubators and technoparks – connecting the elements of the innovative ecosystem

Expert article • 1518

In recent years, the positive dynamics of development of the innovation infrastructure in Russia is evident. For example, from 2010 to 2012 the volume of venture capital investments in technology start-ups has grown 50-fold from USD 20 million to USD 1 billion, with the share of "government" funds in the form of funds of Russian Venture Company has decreased from 50% to 5%. This is demonstrated not only by the emergence of new instruments to support small businesses (government does a lot in this regard), but also by the market participants' understanding of the basics of building the system of technological business in Russia. In particular, Russian and international experience in the development of technology companies through the mechanisms of business incubation has been studied and systematized. If in the past heads of infrastructure organizations and directors of innovative companies "intuitively" felt the concept of such tool to support innovation, today it's safe to say that the model of technology park or an incubator, which came from the West, has been adapted to Russia.

The task of the government in the innovative market is to be a "guide" for start-up companies. We have to understand that there are a lot of obstacles from the stage of creating the concept of an invention to the market launch of a technology, and such obstacles may only be overcome by intermediary companies, services of which form a network that we call "ecosystem of innovation".

Why are such "guiding" companies so important for the formation of innovative economy? Because an innovative start-up walks along a much more "bumpy" road than a regular small business.

In fact, a start-up developing a new product may not be compared with a company operating on the basis of a clear business model and able to assess its scope in a year or few years. To open a "classic" small business, one can borrow money from relatives and friends (the famous "three F" scheme) promising to repay a debt in six months, and do not worry - because the company will soon begin to bring profits. The purpose of such business is to pass an operational zero as quickly as possible and then to increase its profits.

In case of an innovative start-up, everything is different. It is an embryo of a big business. From a team of two or three programmers or engineers, "a billion company" may grow. And if a start-up is truly committed to success on a global scale (and this is only possible in the case of international expansion), it must be prepared to continually reinvest its profits - in expansion of its line of products, expansion its regional presence, attraction of high-quality professionals and marketing (which is hard to form for a new, unknown product)... Thus, an innovative start-up may only work for capitalization – it may forget about stable return. We all know that over the years Amazon, Google received a huge investment, but also suffered billions of dollars in losses. The beginning of their explosive growth was only a matter of time: as soon as the companies found a proper business model, they got stunning results.

Thus, the very essence of business innovation comes down in many respects to its "strength in weakness", which means that at the stage of "experiments" (testing a product and its demand in the market, checking viability of a business model and scaling prospects), these companies need support. High-tech start-ups may receive such support from incubators, benefits of which form a unique "incubator climate". In such circumstances, a start-up gets access – in a shared use mode - to real estate, high-tech equipment, consulting services of experts in different fields…

That is why it seems wrong to me that many heads of Russian authorities require from innovative platforms (incubators, technology parks) a stable revenue flow from residents. For an innovative start-up, the right criterion is the capitalization growth: attracting investment, increasing a consumer base, intellectual property. The main product of an innovative start-up is, in fact, that start-up itself, i.e. the idea, loyal users, team.

Another dangerous misguiding thinking of heads of Russian business incubators and technology parks is the belief that the main thing is the property complex, real estate, while the range of services to support start-ups will be provided by a team of managers on its own. For an innovative start-up, real estate is not critical; the key is the development and promotion. Heads of an incubator or technology park cannot have all required competencies, be both good lawyers, economists, accountants, technologists, business analysts, organizers... All of these functions must be performed by companies with which an incubator or a technology park will be partners. This is especially important for infrastructure platforms which aggregate start-ups around from various fields. For example, residents of our business incubator "Ingria" are 70 IT companies and 3 nanotechnology start-ups. It is not profitable for us to keep a staff expert in this field: we outsource experts. It is also important to teach start-up companies, which often underestimate the role of "non-technology" skills for the development of a project, to value these services and to pay for them. The consulting market in the innovation field in Russia is just being developed and, contrary to common belief about its significant profitability, profitability of high-quality consulting services rarely exceeds 10-15%.

Incubators and technology parks should play the role of "connectors" of various elements of the infrastructure: to "let in" experts in different fields and to "bring" start-ups to them. The concept of a technology park as a "meeting place" is also important due to the fact that it is beneficial for many players to participate in its work: consulting companies look for customers, investors – for portfolio companies, mentors – for start-ups that need an advice. In this connection it is possible to expect that partners will do a lot for a technology park and an incubator for free. At least that was the experience of the business incubator "Ingria". Our task is not to drive trains, but to build roads, to clear the debris (including, in minds) and to achieve the busy traffic on these routes, which are of key importance for Russia. ■

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KONSTANTIN FOKIN

# Flying with the wings of business angels

Expert article • 1519

Russian innovative market has recently seen a growing number of public-private partnerships. Many tools are designed to support the start-ups at the pre-seed and seed stages, when the government works with seed investment funds and business angels. Unlike Russia, over 90% of the venture capital market worldwide is money for start-ups. This is a serious challenge for the Russian innovation market as it is the mass support of start-ups that increases the probability of new success stories and the organic growth of the industry. Nowadays the government implements efforts to shift the venture market focus from advanced companies to "beginners."

The major role in the start-up investment market belongs to business angels who are informal investors ready to invest their personal funds (up to $1 million). According to RVCA, the angel financing in Russia exceeded $130 million (in 2011), and taking into account the shadow market (the visible share is about 10% of the seed investment segment in the developed economies), its potential is estimated to be $1.3 billion. Today there are about 15 associations and business angel networks in Russia, which unite hundreds of private investors. The largest business angel network in Russia is the National Business Angels Association (NBAA), which unites thirteen communities of venture capital investors. All these vividly show that in Russia there is a new class of investors who are in need at the current innovative market, the individuals ready to invest in start-ups.

However, there are some problems leading to the need of governmental support to business angels.

To begin with, in Russia lacks of people with sufficient funds to put at risk. Therefore, the Russian business angels are still rather "cautious." It also important that a business angel is committed to a project and has an experience in the industry a start-up belongs to. All three components of an "ideal" business angel – money, commitment and experience – are still rarely met among people supporting Russian innovative start-ups. This problem is usually solved through co-investment programs implemented jointly by governmental institutions and business angels: the government finances innovative start-ups, in addition to business angels and using their expertise in selecting the most promising investments. And the commitment of business angels to hi-tech industry and their competence will, I am convinced, arise with the maturity of the Russian venture capital market.

Secondly, the "older generation" of wealthy Russians consider state paternalism as an organic feature in the most promising areas. Therefore the government comes to the innovative market popularizing the technology investments idea, forcing those who still use only well-proved investment instruments to turn to the venture capital market. It is possible to stimulate those who hesitate on innovation investing by interesting projects and the fact that IT projects (software, web services or mobile applications) need not that much investments.

Today the government co-invests with business angels in three formats. First of all is a tax benefit - the government does not collect money could be used based on its needs. Actually, the "lost income" could be considered as a governmental investment into the innovative industry. Secondly they are the public-private co-investment funds like the Moscow Seed Fund and RVC Seed Fund, where the government "adds money", sharing both risks and future incomes with business angels. Third, the government implements the stimulating programs for business angels and investors and for higher competence of businessmen. Innovation competitions, pitch sessions, educational events, service support – all that should also be in a governmental focus (like in any other developing market where the Russian venture capital market undoubtedly belongs).

In western countries, co-investment funds are usually "tied" to a stable group of private investors who have proved their reputation for some years. Russia has no such sustainable communities yet - they are at the stage of development. In this context, the government should hold a competition among business angels seeking to join co-investment programs (taking into account their reputation, experience, amount of "free" funds). All that takes effort and time. For this reason, I consider that the government should promote shared investments by business angels with their peers or venture funds into large scale deals, as it will enhance business ties among private investors. ■

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MARIA PODLESNOVA

# RusBase – single point of entry to the Russian technological media space

Expert article • 1520

One of the most important components in the development of an innovative ecosystem are high-quality media services that provide access to information about industry events and its condition as a whole, as well as market analytics. The critical goal is the effective work of not only media engaged in the promotion of technology entrepreneurship, but also venues for communication between participants of the venture capital industry.

The capabilities of modern online media make it possible to combine both of these components into a single resource. In Russia, such site is the RusBase project (first name - Startup Afisha). The project was launched in December 2010, and a new website and a new concept became available to users in October 2012. RusBase aims to maximize the effective integration of the Russian start-up community into global venture capital space.

For foreign investors and start-ups, RusBase is a single point of entry to the Russian market where they get all the relevant information and analytics of the industry, as well as networking and services to start work.

To tell you a few words about our story, RusBase derives from the Russian language project “StartupAfisha.ru”, founded in December 2010 by Alena Popova and Maria Podlesnova. StartupAfisha was initially a Russian version of “Startupdigest.com”, but within 2 months it grew into a platform that comprised a news service, an open events calendar covering all regions of Russia, an online start-up school and a recruitment service. In the summer of 2011 StartupAfisha was redesigned to add more services, such as a digital start-up map, trend analytics and a list of start-up communities and people. In December 2011 StartupAfisha launched a database of all Russian incubators. When, at the start of 2012, Black Ocean (investor) met with StartupAfisha’s Team, our 10 months of collaboration resulted in what is now called RusBase. Today startupafisha.ru is the central Russian start-up/investor hub that provides all information for RusBase. We are working like media platform that provide news / analytics, like service platform and like database (Russian Crunchbase). Startup Afisha’s Calendar is the main for Venture industry in Russia. Also we have a central service of matching start-ups and investors.

RusBase becomes not just a media or service provider, we’ve created a kind of model that could be used by any country to make its VC market global. We’ve designed ideal structure of IT-platform that works as a tool that opens and discovers local markets, get insights and bridges international community with country players. We strongly believe that only combining of media, database and services will work if you want to attract foreigners to invest in your local market. And we do know how to mix them to be successful.

Only such model (media + services) could be monetized. Next year RusBase is going to help its own events. Moreover RusBase Partners Program is one of the main services for Investor Community, with already existing members that are interested in co-investment and spreading on another markets. RusBase Partners Program includes both Russian and foreign VCs so that we can provide bilateral services such as co-investment and risk sharing, searching for the best IT-projects to invest in, venture marketing and analytics etc. And in August 2013 RusBase has launched special project - Venture Kitchen – for potential investors, to attract new people in Russian Venture Industry.

RusBase is the project aimed at the creation of an international media resource, which already gathers the most complete information about the Russian venture industry.

The Russian and the English versions are two parts of a single project, which are combined by the same services, but focus on different audiences.

The core of the Russian portal (former name - “Startup Afisha”) became the project “Wiki Start”. Wiki Start is a wiki-platform used to maintain a base of transactions conducted in the Russian IT-market since 2008. Today, any user of the Website may become an author of the startup-encyclopedia. Thus, originally a model of moderated content UGC (User Generated Content) was offered: analysts of RusBase just compile the information and double-check the facts before publishing them.

Wiki Start does not cover other innovative fields (e.g., biotechnology, alternative energy or industrial technology). The main condition for the entry of a new element in the base is matching with any existing element. As a result, any component of the ecosystem - a company, an investor, a character or an incubator - gets its special «business card» containing basic information. It is also important to note that we are focused on trying to make the Russian market as transparent and understandable to Western players as possible. Therefore, another important criterion for entry of a start-up in the database is disclosure of investment made in it (it is necessary to specify a date of a transaction and a link to its description in an open source), and a name of an investor. If you want to add a person, then he/she must “match” another card (Fund/ Company/ Business Incubator) - such a requirement makes it possible to trace the connection between players in the market and pass from one card to another.

It should be considered that not all executives of Russian start-ups like the idea of the need to disclose the information about raised funding, however it is our principle. We are confident: if founders of a start-up do not invest in themselves, or do not find an investor willing to believe in them, such project is not interesting for the market. And in such case, is it worth posting information in the All-Russian venture encyclopedia?

The Russian-language base has also been translated into English and became the encyclopedia of the Russian start-up market for foreign partners containing the scope of transactions and results of the main players. The English version, in addition to the standard media part (RusBase contains such categories as «News», «Analytics» and «Video») and the base of transactions,

also has the «How To Invest» section. This is a guide line that answers five major questions of foreign investors:

1. Why to invest in Russia?
2. What are the common risks?
3. What are the promising projects to invest in?
4. Who are the possible partners?
5. Where to find additional services?

It is planned to expand databases by including projects from knowledge-intensive industries. We are also working to attract key venture capital players of the Western market. We hope that soon we'll be able to adequately present Russia to foreign investors. This will create a new image of the Russian market as one of the fastest growing in the world - which, no doubt, will be of interest to potential venture partners of our country. ■

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MICHAEL KHARUZIN

# RVC Seed Fund – sawing into success

Expert article • 1521

Start-up investments are often a gap in the developing innovative markets. Few years ago, Russia has not been an exception in this sense – a small number of business angels invested in the pre-seed and seed stages (mainly in IT projects), as there have been no specialised seed funds. In 2009, only 18 transactions with the start-ups were registered in the Russian venture capital market; their total amount was hardly more than $10 million (against 38 transactions and almost $70 million of the total amount of investments in 2008).

We have observed reduced investments in start-up projects against the market. It generated a serious deficit in the market of the small technological businesses, which could subsequently apply for investments from venture investors. To solve this problem, the Russian Venture Capital (RVC) together with the Fund for Assistance to Small Innovative Enterprises (FASIE) created the RVC Seed Fund, which, in three years, has developed a number of tools to support the seed-stage companies on the Russian market. Today, the Fund provides up to 75% of the investment demand for any innovative company at the first investment round (up to RUB 25 million) in exchange for a share in the project company. Over 77 venture partners in 32 cities throughout Russia help us select the projects. As of August 2013, RVC Seed Fund had 54 portfolio companies, and their number continues to increase.

Today, other institutions also operate in the seed investment market, including the FASIE, the Moscow Seed Fund, the Skolkovo Foundation and regional funds, actively promoting grant programs. Actually, the joint efforts of the RVC and market stakeholders provided the growth of the seed investment sector to its maturity. Recently the main goal of the government and development agencies has become to provide the companies, which were invested in at the pre-seed and seed stages and reached their first commercial implementations, with the conditions favourable enough to reach the next investment rounds.

In this situation, it is important to pay attention to the quality of the Russian start-ups, which is growing not that quickly. Many companies build their business in the IT sector and create numerous variations of already existing web services or mobile applications. The venture capital market is also entered by the private enterprises aiming to upgrade their manufacturing facilities using venture investments, instead of their own capital investments. In my opinion, such start-ups have no venture history, in its classical meaning. The “cream de la cream” of the start-up market has already been skimmed, and now we should meticulously work with real hi-tech projects, which have the innovative potential in the global market.

The challenge is not so easy. One of the problems is that there is a class of start-ups which, having received financing at early stages, do not try to develop the business (to reduce costs, to compete for the market share), but prefer to draw a picture of their project at every public event related to innovations. For some years, such projects managed to adequately present themselves at competitions, forums and investment sessions and receive grants; but it does not go further than that. Alas, Russian start-up entrepreneurs do not want to realise that the “innovative lift” should stop somewhere. The last “floor” is IPO, which is still considered by Russian businesses as an overseas wonder. Moreover, a more real success story, such as sale to a strategic investor to achieve a partial/full cash-out, is still rare in Russia. In such conditions, the development agencies should probably cease or reduce announcing new start-up deals (press releases about million dollar start-up financing stir up the “fashion” for innovation, rather negative) and focus on the mass cultivation of innovative businesses able to generate dividends and to achieve the technological level high enough to enter the international innovation market and, ideally, to “sell itself” to a transnational corporation. Such success stories are crucially needed in Russia.

Over the last few years, the development agencies have been creating comfortable conditions for technological businesses; and they have succeeded. Russian scientists ceased to flee from the country; innovative business ideas became popular among talented young men. Thus, now the Russian innovative economy should become independent from governmental support and generate profits, create workplaces and pay taxes. Russian start-up teams should realise that money invested in them is intended not for infinite experiments or high salaries but for creating high-margin businesses based on their innovative developments. ■

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NATALIA POLYAKOVA

# Intellectual property in technology development in Russia

Expert article • 1522

One of the problems that seriously restricts the growth of the Russian innovation market is insufficient attention of Russian scientists to the protection of intellectual property. According to the World Intellectual Property Organization (WIPO), Russia's share in the total number of applications for the grant of patents for inventions is about 2.0% of the total number of applications for inventions filed in the world. In 2012, Rospatent received only 44,211 applications for inventions; the agency issued 32,880 Russian patents for inventions. For comparison: In China, which in 2011 was the leader in terms of patent activity, the number of applications for inventions filed in the past year reached over half a million; the number of applications considered by patent agencies of the USA, Japan, South Korea, is several hundreds of thousands.

However, it is clear that for successful commercialization of intellectual property it is necessary to ensure its protection. An inventor, who has not obtained a patent, is at risk for finding himself in the same situation as a person who has not put a lock on the front door because he thinks that even the most complicated mechanisms cannot stop an experienced burglar. It is possible that a burglar could easily open the door, but in case of absence of the lock, an apartment owner can not even file a robbery report to the police. The refusal of law enforcement authorities will be motivated: the apartment owner did nothing to prevent the robbery. The same goes for intellectual property: you must take all measures to ensure that third parties would not use it. To do this, there are procedures of state registration of intellectual property. However, the government will guarantee the safety of your intellectual property only in exchange for the disclosure of information: information about a patent becomes publicly available as from the date of the application publication. Unfortunately, many Russian scientists and innovators are not ready to share the details of their inventions, underestimating the importance of the registration of patent rights.

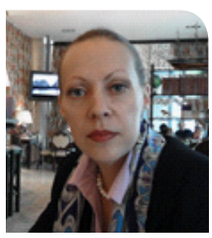
> [...] Russia's share in the total number of applications for the grant of patents for inventions is about 2.0% [...]

Another systematic mistake of researchers is the reluctance to consult with professional patent attorneys. Owners of patentable concepts often do not want to overpay for expert's services. And we understand that a duly executed application is a key to success of the patent policy of an innovation firm. However, even those who are willing to deal with patent attorneys, are rarely able to clearly explain a purpose of obtaining a patent. When depending on purposes and strategies of a firm, patents may be advertising or fence, defensive or offensive, provocative or simply an element of the office design. Unfortunately, Russian innovators, while remaining more "people of science" than businessmen, do not take into account such peculiarities when applying to patent offices. As a result, the majority of Russian patents are either too "averaged" or have too many claims, and thus are not effective in terms of business operations and commercialization opportunities.

Scientists face the same difficulties and make the same mistakes when obtaining a patent abroad (this is required for any innovative product with export potential). Many people forget that to obtain a foreign patent, they only have one year from the date of filing an application with Rospatent or the date of priority. This results in a situation when your Russian patent or application is opposed to your foreign application, i.e. the application does not meet one of the three criteria for patentability, namely, absolute international novelty (the criteria for patentability are: industrial applicability, absolute international novelty and inventive level, or inventive step). In such conditions, a Russian team which has developed a concept having export potential will not be able to fully use foreign markets due to the three principles of the patent law: 1. territorial: a patent is valid in the territory of patenting, 2. national: in accordance with the laws of a country of patenting, and 3. time-dependent: for example, a patent for an invention is valid for 20 years from the date of priority. In different countries there are "improvers" which are ready to refine a technology and to register their own patents. It is hard to understand the details of the process of registration of intellectual property rights, however it is still possible, as it is very important that Russian innovators should understand the need to cooperate with patent attorneys. They will, in particular, help to properly execute an application, which should be neither a scientific article nor an autobiography of the future patent holder. Only an expert can prepare an application that would contain all necessary information and at the same time would not disclose any confidential information. In Russia, scientists often want to obtain a patent, without denying themselves patent claims, and ultimately they reveal secrets of a concept so that there is no use protecting intellectual property. Indeed, if all details are published, potential users of a technology do not need to enter into a license agreement or an agreement on alienation (cessation) of rights with a right holder.

Thus, inactivity of Russian scientists in obtaining the rights to intellectual property, along with the Russian "rely on a bit of luck" attitude, plus law nihilism and the low level of business culture - all affect the overall level of innovation development in Russia. In this situation, the efforts of institutes for development are aimed at increasing the overall level of culture in the field of intellectual property. We need to explain to people why it is so important. We also expect improvements in the protection of intellectual property rights in connection with the creation in Russia of the Court for intellectual property rights. Indeed, only if there are reliable and civilized patent and judicial systems, intellectual property may truly be the guarantor for investors giving their money for innovation. Despite the fact that among intellectual property items, 5% to 10% business angels and venture capital funds are ready to support promising national concepts. In recent years, the markets for intellectual property and business culture in Russia are being emerged, in particular, due to the efforts of the government. Today, we can be confident that the course

of the governmental support has been chosen correctly: in the coming years, with the increase in activity of venture capital investors, innovators in Russia will stop save expenditures (for registration of their exclusive rights and using the help of experts, as it is now accepted all over the world) and will understand that all costs associated with the protection of intellectual property will ultimately pay off. I am sure that to form the intellectual property market, the government should take such measures as allocation of target grants for the registration of patent rights, and conducting educational events that focus attention of scientists on quality protection of intellectual property. ■



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RENAT GARIPOV

# Russian Startup Rating – ranking the success stories

Expert article • 1523

In the end of 2012, together with colleagues from RVC we started thinking about creating the rating of investment attractiveness of "young" Russian companies developing innovative services and products. We were confident that this tool would be useful to the market, and the main issue, of course, was how best to implement the method and the process of assigning ratings to startups. Today, Russian Startup Rating (http://russianstartuprating.ru/) is an effective tool for evaluating innovative projects; value assigned to each of them (from D to AAA, along with credit and bank ratings) is valid for six months and then extended through the re-evaluation. After analyzing the response of the Russian venture community and adjusting by several stages the mechanisms of expert review of start-ups, we have obtained a flexible and scalable service that now covers more than half a thousand start-ups, including not just online projects, but also high technology developments in the field of security, transport, energy, creation of new materials and equipment.

When conducting due diligence, investors carry out a deep analysis of the projects that have submitted an application to their venture capital fund. Such analysis may be carried out for a limited number of projects, and the results are not available to others. Various contests also give the opportunity to determine the quality level of venture capital projects; but, as a rule, projects are evaluated at contests "at the present moment" and more superficially. We do the work that lies in the middle: we more deeply analyze each start-up and can work with a wide range of small businesses. This, on the one hand, allows us to give advice to investors, and on the other - to provide a quality profile of the market of technology and start-ups. We have not seen such services abroad (the international project http://www.startupranking.com/ which evaluates media activity of start-ups is a pleasant exception). Attempts to create a rating were made in Ukraine and Russia in 2009, but they failed. However, the lack of such services in other countries is logical - everything in its own time: "mature" markets with a developed ecosystem do not already need ratings or they replace them by other instruments. Now, both minimum components already present in the Russian venture capital market: an active supply (represented by start-ups and technology) and demand for them (represented by investors, corporations and business angels). The purpose of the Russian Startup Rating is to connect these two components.

The evaluation of projects within the framework of the Russian Startup Rating is carried out in two stages. In the first stage, projects get points based on the data provided by a start-up in a detailed application: we study the composition of a team, the size of the market, the availability of patents, etc. In the second stage, projects are evaluated by experts (both as part of expert meetings and through online voting) by **Product, Market** and **Team** categories). As a result of this work the final score is formed.

To engage a wide range of projects and investors to such evaluation, we work with a number of partners. Projects in High-Tech field are evaluated by the Center of Commercialization and Innovation of the HSE, a consulting company having extensive connections and experience in technology parks, business incubators, Academic Towns and core businesses. Medicine and healthcare projects are processed by the Association of Medical Start-ups MedStart, and IT/Internet projects are submitted to the center Digital October. All these companies are also actively involved in improving the methodology (Russian Center for Technology and Innovation PwC helps us in its development).

We set two major objectives for the Russian Startup Rating: first, to show to existing investors promising technology in knowledge-intensive fields (such fields as "green technologies" and biotech remain "blind zones" for Russian business angels and foundations); second, to show a well-structured database of start-ups to those who is still thinking about investing in high technology.

These objectives are difficult to achieve without a strong media support, thus Russia beyond the headlines, a foreign partner of Rossiyskaya Gazeta, helps us report about activities of the service. The international agency SPN Ogilvy and Russian PR-company A-TAK, which has broad experience in the promotion of start-ups, also work with mass media. We report the evaluation results at major industry conferences such as DEMO and TechCrunch.

We constantly keep feedback with representatives of the venture capital market, and it is important for us to make all processes of the evaluation as transparent as possible. For example, we are now moving away from the concept of "investment appeal rating" (as it only may be qualitatively assessed by an investor who votes for a project with his money) towards the service that evaluates the availability / absence of necessary elements of success in a start-up. We do not want to create neither an additional project "promoting technological entrepreneurship" nor another "gallery of startups". Our goal is to create a quality benchmark for investors of market technology market. ■

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VICTOR SIDNEV

# Regional innovative cluster – Troitsk Innovation Center

Expert article • 1524

The basic idea of the cluster approach to building an innovative economy is to focus limited resources of government support in a particular territory. To accelerate the development of certain sectors of the economy, the government should not spread limited resources throughout the country: it is especially true for Russia, which occupies one ninth of a total land area of the world. A more appropriate strategy is to analyze places with the seeds of innovation economy, and to support these regions. The clusters are formed mostly on their own (without government support): sometimes for no apparent reason companies are gathered on some territory, and their productivity in certain industry is higher than in other territories. A key feature of a cluster is co-competition: by working in the single industry, cluster members, on the one hand, compete with each other, and on the other - with the outside world they act as representatives of the cluster. This makes them more competitive.

If we talk about the Troitsk Innovation Cluster, there are several favorable conditions for its development. First, there may be no innovation without science (if we talk about technological innovation). Troitsk is a science city with a long history, a world-class research center with competencies in the various fields: laser physics, radiation technology and new materials. These fields have become a priority for the development of the Troitsk cluster. But innovations are primarily business. The development from a scientific concept to a commercial product requires the creation of appropriate innovative infrastructure, which allows not only for conducting research, but also for creating a prototype of a future product, and making its preproduction lot. Therefore, at our nanotechnology center we have the center of technological support, the industrial design studio, and specialized technology companies (for example, the company engaged in spray coating of multilayer laser mirrors), without which it would be impossible to create innovation in a particular field. In addition, the nanotechnology center also includes a business incubator, where start-ups can take the first steps in business and get support from more experienced colleagues.

Already today we have several companies working in the field of laser technology, especially in the field of laser application in medical devices. For example, Optosystems, our core business partner in the establishment of the nanotechnology center, produces up to 70% of ophthalmic laser systems for the Russian market. Today, the company is preparing for a market launch of a new type of a device using a femtosecond laser, which will completely eliminate the use of conventional surgical instruments during a surgery. Recently, we have established a company to test the technology of manufacturing artificial diamonds based on CVD technology. Today, these products are in demand by manufacturers of drilling tools, dosimeters, surgical instruments and other products.

Anyway, the top priority of governmental support of clusters is the development of innovation infrastructure. Infrastructure is a very capital-intensive activity with low return. Therefore, businesses poorly invest in it. The tasks of each cluster are, of course, associated with its specialty. IT companies generally do not need “hard” infrastructure: all they need is office space, computers and good communications. But if you are engaged in material innovation, that is design, development and manufacture of industrial products, then you need much more, starting with the modern machines and ending with expensive analytical equipment. A key role in this process belongs to the Troitsk nanotechnology center. We already purchase equipment for hundreds of millions of rubles, select and train personnel to work on it. By analogy with Yandex, the motto of which “You can find here anything!”, our motto is “We can do anything!”.

For Troitsk cluster, in my opinion, the main problem today is the lack of specialized real estate and technology infrastructure. The situation is paradoxial: Troitsk Institutes have huge areas specially built in Soviet times to study science and innovation, but innovation companies do not have access to them. About two years ago, the Supervisory Board of the Agency for Strategic Initiatives, chaired by Vladimir Putin, decided to create a technology park on the basis of unused RAS property. Since then things haven’t budged an inch... We have great expectations for the new heads of the RAS. In contrast to the previous President of the Russian Academy of Sciences, who in 22 years of his presidency did not come to the academic science city of Troitsk, Vladimir Fortov did not just come to Troitsk, but also together with Moscow Mayor Sergei Sobyanin signed the Agreement on joint development of the technology park on the basis of the RAS property. This fact reveals one more very important change for the cluster. Recently, I heard on the radio how Minister of Science Livanov said that for the time of his work, he never talked to Yuri Osipov (although he met with him every week at a meeting of the Government). It is impossible to carry out any reforms if their key participants do not even talk to each other! Hence, another important issue (and the main task of the government) is to establish a productive communication between cluster members: science, business, education, and government. Only this will allow cluster members to fully use their key competitive advantage – co-competition. ■

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# The perspectives of the Russian-EU cooperation in the field of use of the LNG as motor fuel in the Baltic Sea region

Expert article • 1525

The analysis of the project activities related to the European transport system development which shows that in the nearest future marine and river vehicles will use liquefied natural gas (LNG) as motor fuel. Led by Denmark, Finland and Sweden the majority of projects are targeted on LNG-infrastructure establishment. The mentioned above processes stirred up since 2011.

In 2011 the representatives of four countries of the Baltic macroregion (Denmark, Sweden, Finland and Estonia) signed agreement with TEN-T (The Trans-European Transport Networks) to run "LNG in Baltic Sea Ports" project. Leaders of the project are Malmo-Copenhagen and Orhus (Denmark), Helsingborg and Stockholm (Sweden), Helsinki and Turku (Finland) and Tallinn (Estonia). In the nearest future Szczecin-Świnoujście (Poland) and Riga (Latvia) will join. The main goal of the project is to develop joint strategy for establishment of LNG-bunkerage infrastructure in the Baltic Sea Region. Each of the consortium partners plans port infrastructure development to give ship-owners opportunities to use LNG as alternative transport fuel. Being successful this experience can be transferred onto other European transport areas.

At the same time the Netherlands, Belgium, Denmark, Sweden, Norway and Finland form the market for the new motor fuel – gas-fuelled marine and river vehicles. Such projects are also financed by the EU: the ferryboats "Viking Grace" and "Fjord Line", river vehicles "Ecoliner" (under support of the Government of the Netherlands) and "Fjalir" (Sweden).

To ensure extensive use of LNG-vehicles the EU develops international legal platform. According to the MARPOL documents it is planned to limit maximum share of sulfur in marine fuel by 0,1% by 2015. This will lead to drastic increase of costs of traditional fuels, reconstruction of vehicles and LNG-bunkerage infrastructure development. We can predict that certain environmental limitations for ships going through the Danish Straits will be introduced in 2015.

The EU announced policy for wider use of LNG in the nearest future. Thus experience gained in The Northern and Baltic Sea Regions will be used in other European regions and first of all in the Mediterranean. More than 139 LNG structures will be in use till 2020-2025. Moreover, LNG-infrastructure for heavy trucks and CNG-structure for automobiles should be established in 2020 all over the region road network.

Russian companies started research projects on LNG-infrastructure development in the Baltic Sea Region as well. The LNG-terminal is planned in Ust'-Luga, some Russian companies ordered LNG-carriers (i.e. Gazprom) and LNG-fuelled ships (i.e. Gazprom Export).

Realization of the LNG and the CNG projects in the North-Western Federal district seems to be very forward-looking. The Strategy of LNG use in St. Petersburg and Leningrad Oblast includes:

- Evaluation of opportunities for the LNG use as fuel for small agricultural vehicles;
- Creation of LNG-infrastructure in the ends of European transport flows – St. Petersburg – Helsinki through Vyborg and Kotka-Hamina ports; St. Petersburg – Tallinn through Ust'-Luga and Paldisski ports; Riga – Moscow and Klaipeda – Belorussia/Russia.

The development of LNG-filling stations' system must be developed according to transport flows from the EU:

- Strategy of LNG use in NW Russia must be developed jointly with the EU;
- Perspectives of the international LNG-terminal in the Finnish Gulf must be evaluated;
- Harmonization of legal issues and technical regulations from the very beginning is crucial to avoid the "socket paradox" when different countries have different technical characteristic of the electricity socket.

Abovementioned problems were discussed in St. Petersburg in framework of The 7th International scientific conference "Energetika XXI: economy, policy, ecology" which is traditionally held be the St. Petersburg State University of Economics and JST "Gazprom". The discussion at the "LNG development in the BSR" workshop gathered together representative of GasTerra R.V., SSPA SWEDEN AB, JSC "GydroGasCenter", JST "Company Ust'-Luga", Lithuanian Association of Energy Economics, "BaltGasBunker", STATOIL, "Soyuz-Invest" and many others. Participants agreed to continue discussions in framework of the expert team. The following expert meeting will be held in Aleksanteri Institute of University of Helsinki on 10th April 2014. ■

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# The Russian FDI in the Baltic Sea region

Expert article • 1526

Russian foreign direct investments (FDI) outflows appeared long before the collapse of the USSR. However, only in the 2000s Russia became a significant exporter of capital in legal forms. According to the Bank of Russia, the Russian outward FDI stock reached $406.3 billion at the beginning of 2013.

Neighbouring countries are usually more popular as recipients of FDI. Countries of the Baltic Sea region are not an exception for Russian investors. Nevertheless, there are two limiting factors for investment expansion of Russian transnational corporations. First of all there is a strong competition between Russian and Swedish investors (in Finland and the Baltic States) or German investors (mainly in Poland). Various political problems also exist, for example strong disputes around rights of ethnic minorities in Latvia and Estonia or some cases of investment protectionism in Poland (e.g. against Acron). As for the Schengen unfavorable visa regime, it disturbs some foreign contacts of Russian businessmen but it also leads to a significant FDI stock of Russian citizens in Latvian real estate (in fact, they "buy" stay permit in the EU). Only Finland can be compared with Latvia by Russian FDI in real estate in the Baltic Sea region (due to a Russian diaspora and close touristic ties with St. Petersburg).

We cannot also forget rather a small size of economy of the Baltic Sea region. Some Russian companies used to establish subsidiaries in the Baltic States as a bridgehead for their expansion in the whole EU. However, RESO (insurance), LSR (construction materials) and some other investors realized that rather comfortable business climate of former Soviet republics cannot help in competitive struggle in markets of "old" EU members. As a result, the share of the region in the Russian outward FDI stock will decrease when Russian transnational corporations become more active in North and Latin America, Asia or Africa.

According to the Bank of Russia, Lithuania is the main recipient of Russian FDI in the Baltic Sea region. At the beginning of 2013, their stock was $1.33 billion. Finland was slightly behind with $1.31 billion. However, the growth of the Russian FDI stock in Finland was $336 million during 2010-2012. Latvia was on the 3rd place with $0.88 billion and the growth of the Russian FDI stock was $344 million during 2010-2012 which was the record of the region. Sweden was on the 4th place with $0.84 billion but a great instability and finally a slight decrease of the Russian FDI stock during three years took place. The Russian FDI stock in Germany was $9.09 billion but only small part of it was situated in German lands of the Baltic Sea region.

Russian official statistics showed that the Russian FDI stock was $0.6 billion in Poland and only $0.27 billion in Estonia at the beginning of 2013. However, it is well-known that many Russian FDI flows are trans-shipping via offshores. The Institute of World Economy and International Relations (IMEMO) of the Russian Academy of Sciences made a research on actual locations of Russian foreign assets. It was found that the real Russian FDI stock was $1 billion in Poland and $0.87 billion in Estonia.

Many large projects with Russian FDI exploit a transit location of the Baltic Sea region. Globaltrans controls a railways operator in Estonia. Global Ports has subsidiaries in Finland while several Russian chemical companies have terminals in ports of Estonia and Latvia. Transneft owns 34% of LatRosTrans which is an operator of oil pipelines. However, the leader is Gazprom with its assets in Finland, the Baltic States, Poland and Germany.

There are also Russian market-seeking FDI. For example, LUKOIL has petrol networks in several countries of the region while Bank of Moscow owns 59.7% of Eesti Krediidipank. Main industrial plants under Russian control are situated in Finland. For instance, Norilsk Nickel has a Harjavalta plant and OSK owns 50% of Archtech Helsinki Shipyard. However, some large projects can be found in other countries too. For example, RUSAL owns aluminium plant KUBAL in Sweden and EuroChem has a production of fertilizers in Lithuania. SPI Group produces alcohol beverages in Latvia while Russian Standard bought a vodka producer in Poland. There are many small projects in different other sectors, including construction materials and food industries, electricity, hotels and IT-technologies.

At the same time, there were several large unsuccessful examples. Russians tried to remediate dockyard Wadan in German Mecklenburg-Vorpommern. Yukos lost its control over Mazeikiu nafta refinery in Lithuania. Gazprom has some problems with its gas assets too.

In general, prospects of Russian FDI in the Baltic Sea region are vague. There are many possibilities to increase investment cooperation between Russia and its neighbours, especially for the "second" echelon of companies. However, Russians are afraid of different problems in the region. ■

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# The soft power dimension of Russia's foreign policy towards the Baltic States

Expert article • 1527

The 21st century is marked by a sharp shift in the nature of power. The changes occurred due to the rapid rise of interconnectedness of economic and political institutions in the international arena. As a result, the appeal and positive image of a country became an important tool for attracting foreign investment and boosting international image. This became evident at the end of the Cold War, when liberal values spread to the countries of the post-Soviet bloc, which later would integrate into the EU and NATO. This phenomenon is defined by Nye as soft power—the ability to get what you want through attraction of a country's culture, political ideas and policies. It is clear that in today's highly globalised world soft-power resources are becoming relatively more important and the use of power is becoming less coercive, at least among the major states, which are trying to adopt to these changes. Few would think that Russia would be among the states with soft-power ambitions, but the truth is that it has started to invest in the infrastructure of a soft power.

Russia's soft power is strong and is limited at the same time. Today's system of values is still in the formation process, but it is increasingly based on reviving the pre-Soviet Russian ideas: Christian ideals, trans-ethic imperial principles and the model of strong state in internal and external affairs. Russia's soft-power ambitions evolved in the mid-2000s due to geopolitical events that 'damaged' its image: the colour revolutions, the entry of the Baltic States into the EU and NATO, and Russia's war with Georgia. These processes were interpreted by the Kremlin as a 'threat' to its strategic interests in the region. Western predominance was explained by better access to public opinion through well-developed soft-power channels such as NGOs and the mass-media outlets. Russia decided to counterbalance Western influence with its own interpretation of soft power. Certainly, there is nothing illegitimate about Russia's intentions to implement soft power in the Baltic States but what sets its influence in the region apart from the EU, is its initial objectives and the tools it uses to meet them.

Traditionally, Moscow always struggled to define a precise foreign policy doctrine for the Baltic States as they do not fit into the traditional concept of 'near abroad', nor do they reflect the characteristics of the countries of 'far-abroad'. However, what is critical in Russia's relations with the Baltic States and what helps it to maintain its 'presence' in the region, is a large Russian diaspora. Russia's support for the diaspora translates into a variety of soft power tools that differ from cultural to political means. In general, the use of Russia's soft-power influence in the region could be summarised as the creation and maintenance of Russia-friendly networks in the cultural, economic and political spheres. These networks are maintained through Russia's compatriot policy and the familiarity of the Baltic States' population with the Russian language and culture. The creation of loyal elite and interest groups in various political, economic, social and cultural sectors involves co-opting officials and policy-makers through financial assistance and valuable connections and contracts. The 'boundaries' of Russia's soft power are very blurred: it is difficult to make a clear distinction between cultural, economic and business spheres of activity since influence in the political sector is often achieved through economic and energy networks. Likewise, economic and energy networks are maintained by cultural links to Russia.

Speaking about strengths and weaknesses of Russia's soft power and its future trajectory, it could be argued that although Russia possesses influential cultural and economic channels in the region, Moscow has been unable to enhance its attractiveness among its closest neighbours. The Kremlin officials focus all their attention on loyal constituencies and seek to mobilise individuals, who are already following Russia's agenda. Russia's insufficient soft-power activism in the Baltic States could be partly explained by Moscow's inability to offer an attractive model of cooperation, which will not include patterns of strong dependence that affect negatively the long-term development of the Baltic States.

In the forthcoming years, Russia would most likely continue to experience difficulties in implementing soft-power strategy. To improve its tactics, Kremlin should note that the notion of soft power embraces strong normative potential based on *internal standards* of social and political life that are practiced in the country seek¬ing to enhance its influence abroad. It is almost impossible to create an attractive international image without tackling Russia's domestic problems such as corruption, the abuse of human rights, and the rule of law. ■

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# Russia's Baltic policies – what kind of soft power?

Expert article • 1528

Russia has important economic, societal, humanitarian, environmental and (still) military-strategic interests in the Baltic Sea region (BSR) although this region is not a highest priority for Moscow's foreign policies. Over the recent years, the Kremlin's interest in the BSR has grown because of the implementation of the Nord Stream project, some progress in Moscow's bilateral relations with the BSR countries, the need to respond to the EU Strategy for the BSR (EUSBSR) of 2009 and Russia's presidency in the Council of the Baltic Sea States (CBSS) in 2012-2013.

So far Russia's BSR policies turned to be less assertive, as compared to other regions where the Russian and EU interests overlap, such as Eastern Europe or South Caucasus. Russia's geoeconomic and geostrategic ambitions in the BSR are still rather high, supported – contrary to the 1990s – by political willingness and money.

Russia's BSR strategy represents a mixture of different approaches, not always consistent with each other. On the one hand, despite its ambition to be maximally specific Russia's strategy in the BSR has a number of evident lacunae. Moscow failed to use its CBSS presidency to avoid the pitfalls of the EU-Russian relations stuck in endless debates on visa facilitation and different understandings of key concepts of partnership. Without offering a regional way out of the deadlock, Russia instead locked its BSR policy in either controversial (like fighting unnamed extremism) or differently interpreted (e.g., modernisation, public-private partnership) concepts. To put it differently, the Kremlin was unable to use the chance of the CBSS presidency to effectively build its political and institutional capacities in the BSR. It is the lack of a normative appeal that seriously undermines Russia's socialisation in the BSR, as well as in other regions of direct neighbourhood. Moscow was unable to strike a balance between multilateral (CBSS) and bilateral diplomacies. The Kremlin has obviously had communicative problems during its CBSS presidency because it was unable to clearly explain its priorities to the Council's member-states and take a lead in implementing the most important projects. The EU normative hegemony in the BSR to a larger extent remains unchallenged.

On the other hand, many voices in the BSR countries argue that further regional development cannot be successful without Russia, and that there should be an effective interface between the EUSBSR and Russia that is lacking for the time-being. Within Russia the technocratic part of the ruling elite realises that most of threats and challenges to its positions in the BSR originate from inside rather than from outside of the country. Independent experts confirm that these problems are caused by the complex of factors such as the degradation the Soviet-made economic, transport and social infrastructures in the region, the current resource-oriented model of the Russian economy, the lack of funds and managerial skills to develop the Russian part of the BSR, etc. Regional elites understand that the success of Russia's Baltic strategy to a larger extent depends on the efficacy of socio-economic policies in its north-western regions. The Russian leadership seems to understand the need for a deeper engagement of sub-national actors (regional and local governments), yet Moscow is still wary of separatism or attempts to encroach upon federal foreign policy prerogatives. In terms of implementing cross-border and trans-national projects, the Russian federal bureaucracy's policies are not always conducive to the local and civil society institutions' initiatives.

The Russian diplomacy will seek to defend its economic, political, environmental and humanitarian interests in the region, more often bilaterally than relying upon the institutional resources of the CBSS. Moscow will be open to mostly technical cooperation with the BSR partners that are willing to contribute to solving numerous socio-economic and environmental problems of the Russian border-located territories. In promoting its regional policies, Russia will prefer to use soft power instruments. Some of them - like, for example, the gradual legitimation of the Nord Stream project through engaging with its former critics - used to be rather successful. However, against the background of Russia's policy toward Ukraine in 2014, it is obvious that Moscow's interpretation of extremism, as well as its intention to more aggressively protect Russian-speaking minorities in neighbouring countries, will face a negative reception in the BSR and cause new political ruptures, if not security tensions. ■

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# Western companies promoting transformation of leadership culture in Russia

Expert article • 1529

The latest events in Crimea show, 23 years after the system collapsed, for the Western political establishment, that the West can not change Russian political elite's thinking and behavior models by the pragmatic means practiced so far. The West has encouraged and supported – and tolerated – Russia, by all means, to take part in the global political and economic collaboration as a truly accepted member. The overall failure of this 20 years' educational change process towards the Western democracy is quite evident.

As the leading Western politicians have commented the past events, the fundamental cultural and value base of the Russian political top elite still seems to come from the Soviet time. The Western attempts in the past 20 years to even gradually change Top elite's way of thinking and acting have failed - and actually they even did not have any theoretical or scientific ground to succeed.

People change only under a strong want or a forcing must factor. The record high oil price in 2000 saved the elite from the "must change"- factor which still back in the 90's seemed to be the inevitable faith of the Russian future outlook. Thus, the drivers or motives for changes were missing and there was never any true commitment for this change process the West hoped for and believed in.

Bearing in mind all this it becomes evident that trying to change Russia towards modern democracy from top to bottom is not the option. The remaining option, gradual cultural evolution from all levels is an ongoing process that is gradually shaping the culture and life towards the Western standards in the whole Russian society. The Western economy and business plays the key role in this vast change process.

**Western companies and consultants as change agents**

We believe that the substancial base of larger and smaller Western corporates and companies in Russia employing today millions of Russian employees is one of the most important drivers for change in future Russia.

Take as an example a large Western industrial production unit built up far away Soviet era Siberian industrial city giving a new life for 20-30 % of the qualified work force; or, take the intensively "Westernized" cities like Kaluga with 20 Western production plants or Vsevolovzhsk in Leningrad "oblast" with Ford and Nokian Tyres factories, both cities having half the active work force in the Western companies.

In most of the cases the Western companies manage to implement their corporate values like honesty and justice quite well, encouraging own thinking and initiative down to the floor level. Gradually, the new company culture start spreading around and beyond the company's border lines. More satisfied, better paid employees promote the image of "the Western way of working and western culture" in their social network. Local authorities respect genuinely the rare honest tax-payers in the city. The overwhelming employer image of the Western companies forces finally also the local companies and competitors to change their old-fashioned authoritarian management patterns to more Western directions leading to the new more democratic life.

In the most competitive Russian market and in its competitive labour market in such cities like Moscow, St. Petersburg and Kaluga, Westernized strong company culture promoting the common Western values has become one of the most important sources of companies' competitive advantage. Thus, in the Western companies' own interest to build up a winning company culture with features respected in Western organizations.

**How to accelerate the change**

We have experienced the cultural change taking place in thousands of Russian managers' thinking and later acting (patterns). In the past two decades we have been working in dozens of large business organizations in Russia, mostly in Western but also in a few Russian companies. Earlier we were in line management, in 2000's - in management consulting. Our main training topic was in hard business issues, like key account development or category management – or training of analytical fact-based skills.

However, our true legacy or mission as consultants has always been bringing in the elements of the traditional Finnish leadership culture to organizations in Russia, into the Russian managers head. Finnish Leadership Tradition has received several rewards and recognition in the past decades as being one of the most successful management styles.

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We have found out that building up a winning company culture in Russian can be even easier than in Western countries, when working with "virgin companies or managers", which have only experience from the traditional Russian management culture.

Company culture will be changed only when the com-

pany's leadership culture changes. We have seen that in less than one year's time the entire company culture starts changing when the management genuinely has adopted and started to practice the new Western leadership style, and issues like:

- Believing in employees' growth capacities and in employees' own will to grow and deliver their best
- Empowering, delegating more power and responsibilities especially in decision making
- Learning the coaching and supporting leadership mode
- Learning to motivate employees for various situations and levels

We will see whether it will take generation or more to find Russia in mid-way to Western democracy. ■

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# The Kaliningrad region – a search for a new model of economic development

Expert article • 1530

The Kaliningrad region is an exclave separated from mainland Russia; it is not rich in either natural or human resources, nor does it have a large internal market. The region's economy is traditionally oriented to the All-Russian market. This orientation was strengthened by the 1996 Federal law on the Special Economic Zone (SEZ) and its successor, the 2006 SEZ law. The 1996 law introduced duty free entry of raw materials, semi-finished goods, and component parts into the region and duty free export of goods produced in the region with the use thereof to the rest of the customs territory of the Russian Federation and the Customs Union. A good is considered produced in the Special economic zone if the value added through processing is not less than 30% (or 15% in case of electronics and advanced household appliances) and if such processing entails a change of the industry classification code.

The law facilitated the emergence of new import substitution enterprises in the Kaliningrad region (working in, first of all, mechanical engineering – electronic household appliance and motor car production – and the food industry – meat and soya processing, etc.), which came to play an important role in the regional and Russian economies.

The 2006 SEZ law also includes customs concessions, however, they are effective for only ten years, until 2016. After that, the SEZ will enjoy only tax concessions introduced by the law. Without customs privileges, additional costs relating to the transit of manufactured products across several borders will make many Kaliningrad goods uncompetitive in comparison to those produced in mainland Russia. Thus, the abolition of customs concessions will result in a dramatic change in the socioeconomic landscape of the Kaliningrad region (from the perspective of both production and labour market situation).

The Kaliningrad region is faced with a need to introduce a new model of economic development, which would replace the earlier import substitution model.

I believe that, in the strategic perspective from the purely economic point of view, the most promising trajectory of the socioeconomic development of the Kaliningrad region is the gradual reorientation of the regional economy towards exportation. Of course, it does not mean discontinuing production for the All-Russian market, it rather relates to a change in the proportion between such production and export-oriented production in favour of the latter.

The prospects of development of export-oriented production in the Kaliningrad region is largely affected by the general state of Russia-EU relations, which, unfortunately, have been far from perfect in the recent years. However, it is important to remember that, despite the current tensions, both the EU and Russia are interested in the development of mutually beneficial relations, first of all, economic ones. Without Russian resources and the Russian market, the EU will lose its positions in the competition with the centres of economic power in North America and East and South-East Asia. Russia, in its turn, needs European technologies, investment, and managerial experience, as well as the EU market (at the moment, only that of raw materials and semi-finished goods and, in perspective, also that of manufactured goods). The Kaliningrad region can and must cooperate with the EU in the framework of positive development of economic and political relations between Russia and the EU thus taking a place in the vanguard of this process. At the same time, it is important to remember that the prospective markets for the goods produced in the Kaliningrad region (despite the difficulties in accessing them) are not exhausted by the EU.

Certain steps towards more pronounced export orientation of the Kaliningrad economy have already been made. So, the Long-term Strategy for the Socioeconomic Development of the Kaliningrad region suggests attracting investment and introducing new technologies in order to ensure competitive export-oriented production and increase exports through improving the tax incentive system and the creation of a system of state support and guarantees for the foreign economic activities of SMEs. The creation of a favourable investment and business climate, which would facilitate investment, development of export-oriented production, and an increase in the competitiveness of the Kaliningrad region in the Baltic macroregion, is seen as the end result of The Socioeconomic Development of the Kaliningrad region until 2020 state programme, which was approved on March 27, 2013.

All the above is creating favourable conditions for further economic cooperation between Russia and the EU countries situated in the Baltic Sea region. ■

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KAJA TAMPERE

# Strategic Communication Management (CM) in the post-communist Baltic Sea region

Expert article • 1531

Considering the researches on media and communications in the Soviet Union, we can say that journalism served communication management function in the Soviet Union. The role of communication management in a transition society is unique. Firstly, this is due to the relationship between propaganda and communication, a very sensitive cultural context for all communication processes in new situations that a transition society has to face. The second important reason is definitely the fact that the countries of Central and Eastern Europe and of the former Soviet Union are undergoing a breakthrough stage in their transition from centrally planned to market economies. Due to such remarkable social and economic changes, it is very appropriate to add a transitional aspect to the communication management that emerged in the new market economy context.

The task of communication management during the first stage of the transition is to build up an image of 'capitalism with a human face' in order to secure public acceptance for ongoing economic reforms. The second task is to create public awareness of the wide range of possible alternative market economy models, by promoting value systems and lifestyles with products and services, and by keeping in mind that in the formerly socialist countries a struggle is currently under way to determine the final shape of the market economy. And thirdly, its task is to facilitate effective functioning of the market economy.

Based on the study done in Estonia in the 2003, it can be concluded that communication management perform a **pedagogical role** in a transition society. CM should be on the frontline of managing changes, as an agent of increasing knowledge and a follower of ethical operations principles, different from Soviet past. In this way a mutual understanding of the ongoing economic as well as more specific processes can be achieved. The pedagogical aspect concerns educating the public and more specifically different stakeholder groups of the organisation in order to help people change together with society and adapt to new cultural, philosophical and economic conditions.

Communication management' pedagogical role is particularly important at the very beginning of fundamental changes. From a pedagogical perspective, adaptation of the different sides in changing situations is much more dynamic, because decisions and strategies are based on special knowledge. An ethically realised pedagogical role helps organisations to learn about new conditions, to learn how to start to live in a new situation an on the other hand, CM' pedagogical role can also help stakeholders to understood organisations' behaviour in a new situation. The pedagogical role is mostly a one-way communication, based on ethics and tolerance. Putting a pedagogical role into practice, it is important to get systematic feedback and to correct procedures based on reactions of stakeholders.

Transitional communication management fulfil a role as an effective instrument for systemic transformation. There are certain 'generic principles of communication management applicable in every economic system', that communication practitioners in Central and Eastern Europe need to account for the influence of political and economic systems to a much larger extent. The legacy of a former socialist system, as reflected in ways of thinking, the structure of the economy, and the mechanism for resource allocation, creates a unique combination of constraints on the application of the universal principles of CM. For this reason we can speak of transitional communication management.

The present author would suggest one additional role of communication management in post-communist economies, the **integrative role**: in the European context it is very important to discover opportunities for cooperation. The last ten years have been revolutionary in Europe – more than half of the European territory changed its basic values at a very fundamental level. As a result, more than half of Europe is still experiencing the stress of the change. In Europe we have encountered problems arising from encountering different national cultures and religious worldviews. In addition, there have been problems with economic, political, ideological, ethical and cultural differences, which are much more complicated aspects than mere differences in nationality. In the present author's opinion, it is possible to find opportunities to integrate the experiences of different economic systems and different societies. To do this it is necessary to have special skills and tolerance, along with good and ethical communication practice. ■

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# Cross external debt position analysis in the Nordic and in the Baltic Sea countries – quartiles 2011Q4-2013Q3

Expert article • 1532

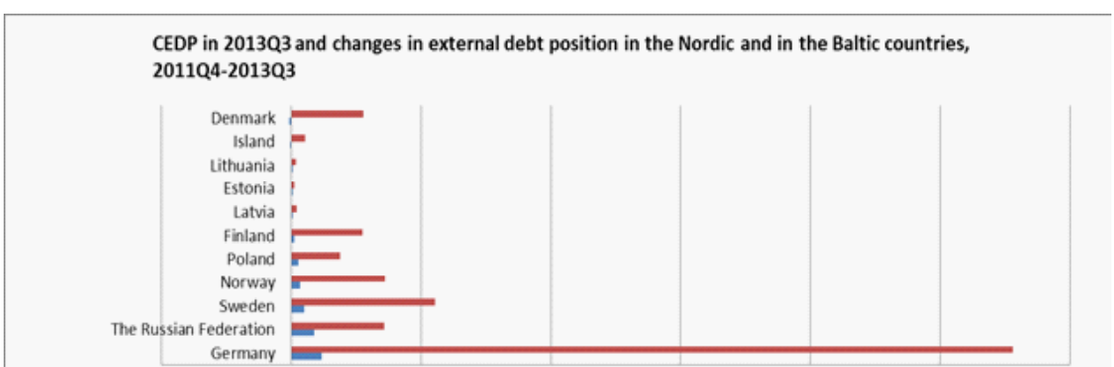
During the years of financial crisis in many countries of Euro area economic challenges of debt management have received a lot of political and economic attention. Policy-makers and citizens are worried about the financial balance of national and public economies. In this article a special financial analysis of cross external debt position (CEDP) is reported for the Baltic Sea and for the Nordic countries. The empirical analysis is based on the World Bank´s debt database (World Bank 2014). The time horizon of the financial CEDP analysis is from 2011Q4 to 2013Q3. The cross external debt position analysis, which is presented in this expert article, covers 8 recent quartiles.

First, cross external debt positions in the Nordic countries were analysed. This comparative analysis informs us that Sweden has highest debt position in the Nordic countries (1 106 870 Million US Dollars in 2013Q3). Naturally, the lowest debt position can be seen in Island (102 806 Million US Dollars in 2013Q3). Among the Nordic countries Norway has the second highest debt position (718 555 Million US Dollars in 2013Q3). In Finland and in Denmark, the CEDP level is at the same level, about 553 660 Million US Dollars in Denmark and 550 356 Million US Dollars in Finland in 2013Q3. In the Nordic countries cross external debt positions have not changed much during the time interval between periods of 2011Q4-2013Q3.

We can observe quite stable time series of cross external debt positions in three countries of the Baltic region. The cross external debt position of Latvia has increased slightly remarkably in 2012Q1, but it still is very low compared to the CEDP levels of other Baltic Sea countries. Its cross external debt position is highest among these three Baltic region countries (41 582 Million US Dollars in 2013Q3). The most favourable CEDP position has Estonia. In 2013Q3 the CEDP of Estonia was 21 729 million US Dollars, the CEDP of Latvia was 41 582 Million US and the CEDP of Lithuania was 32 178 Dollars Million US Dollars.

In this section the cross external debt positions of Germany, the Russian Federation and Poland are reported. Germany is having the highest cross external debt position (5 565 258 Million US Dollars in 2013Q3) among these three Baltic Sea large countries. The lowest burden of external debt is in Poland (376 557Million US Dollars in 2013Q3). Cross external debt burden of the Russian Federation is second highest in this large country group of the Baltic Sea region (7 14 206 Million US Dollars in 2013Q3). During very recent quartiles debt burden of Russian Federation has increased quite much (32% from 2011Q4-2013Q3).

The general finding of this macroeconomic economic study is that changes in cross external debt positions of the Baltic Sea countries have not been extremely radical. Only in Latvia and in the Russian Federation considerable changes in cross external debt position were observed. In the Baltic Rim economic region the highest cross external debt positions have Germany and Sweden. Norway, Russian Federation and Finland have also quite high CEDPs (Fig. 1).




| | Germany | The Russian Federation | Sweden | Norway | Poland | Finland | Latvia | Estonia | Lithuania | Island | Denmark |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CEDP in 2013Q3 | 5565258 | 714206 | 1106870 | 718555 | 376557 | 550356 | 41582 | 21729 | 32178 | 102806 | 553660 |
| Change | 233068 | 173651 | 96367 | 68727 | 53268 | 22504 | 11526 | 1669 | 1166 | -8041 | -18067 |

**Figure 1.** CEDPs in 2013Q3 and changes in cross external debt positions in the Nordic and in the Baltic Sea countries in 2011Q4-2013Q3.

Source: World Bank (2014) Debt Statistics. Table C1. Cross External Debt Position. Web page: http://databank.worldbank.org/data/Views/Reports/ReportWidgetCustom.aspx?Report_Name=Table-C1-SDDS-2009&Id=44d4afa56d

In Fig. 1 we can observe that the CEDP of Germany is over 4.5 times larger than in Sweden. The Russian Federation´s CEDP has similar size scale of CEDP with Norway. Finland´s CED position is quite similar with Denmark. Poland´s CED position is not alarming compared to other Baltic Sea countries. Island and Denmark have paid their loans and report negative changes of CEDPs. Other Baltic and Nordic economies have increased sizes of their loans thus reporting positive changes of CEDP. In time period 2011Q4-2013Q3 biggest changes in CEDPs can be observed in Germany (233 068 Million US Dollars), in the Russian Federation (173 651 Million US Dollars) and in Sweden (96 367 Million US Dollars). In Russia, external debt is a part of the total debt that is partly owed to creditors outside the country. This piece of information is good to remember.

The expert observers of financial market should remember that CED position is always linked to the size of national economy and its trade, consumption patterns and investment activity. ■

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# Modern marketing communication on the Polish market

Expert article • 1533

Traditional channels of marketing communication like for example, television or radio advertising, become less efficient on the Polish market. Companies outdo one another in the number of advertising spots, airtime or catchy content. However, the target group doesn't really trusts this type of advertising, considering it to be a boring, confusing and therefore, usually changing the channel or leaving the room while it airs. On the contrary, the virtual, social and mobile media gain significant popularity. In order to make good use out of them, businesses must better get to know and understand the Polish customer. For that reason, they obtain detailed and in depth knowledge of the target group, including information on when, where and how the various consumer groups use various devices. In addition, they use research tools to assess effectiveness of communication on different screen pages, which translates into specific purchasing decisions.

Consequently, a massive shift of advertising budgets from television into multi-screens can be observed on the Polish market. In addition, there are increased investments in the mobile media communications especially in the case of brands aimed towards young customers. Communicated content is modified in terms of its emissions in mobile media. Some brands start experimenting with micro-video platforms. Also, the expansion of screens in all aspects of our lives, causes that attempts are being made to launch media marketing materials through creative use of digital outdoor media or screens that can be worn on our body, e.g. smart watches or Google Glass type devices.

A significant increase in the Polish market, have the already mentioned, social media. Facebook in Poland has already 8 million of active users. According to the Facebook analysts, Polish Internet users are not only very loyal subscribers (statistically speaking over 51% of registered users surf the Facebook pages), but also have an extensive network of contacts. Facebook users spend more time on it than even on Google. You Tube takes second place, used by 38% of customers, and the third place goes to the most business like network - the LinkedIn, used by 30% of customers. Most of companies (21%) are planning their future presence on Google+, and also consider creating a company blog (20 %). Flickr, NK.pl and Yammer are of the least interest.

With such popularity, no company or brand can afford to ignore social media. Business profiles include more and more information that interest their clients: new product announcements, behind the scenes commercial production videos or new patent making videos. Hence, multimedia materials become almost a requirement. In addition, social media extensively promote activities related to crowdsourcing, utilizing users' activity level for company/brand promotional and image-building purposes, along with the use of viralmarketing.

Moreover, 37% of Polish companies declare, that they have an employee who exclusively coordinates marketing communications in social media. 17 % of the Polish managers and supervisors, who underwent the survey, already have a detailed strategy for action in social media, that is fully integrated with the business development vision and marketing strategies. 43% of respondents declare that their social media activity is a part of their marketing strategy, supporting traditional promotional activities and PR.

Companies in Poland do mostly concentrate on promoting the product and leading image-building activities via social media. They also perform tasks related to sales or customer service, and use public opinions in the design process of new products.

The email marketing is a form directly related to social media and widely used in marketing communications in Poland.

Current studies indicate that the highest level of email marketing is performed by some of the biggest companies, having more than 250 employees. They reach an average result of 67%. What's really interesting, in 2012, in the first place, with an average result of 69% - were medium-sized companies (51-250 employees). Industry, which does the best with email marketing, is the real estate business (73 %). The results of the study indicate that not all of the components of email marketing campaign, i.e. creating customer list, segmentation, delivery and optimization of outgoing newsletters, are treated equally. The greatest attention is paid to building subscribers database, optimizing subscription forms and deliverability of messages sent.

It should be noted that the study also indicates that, although companies recognize the nature and rank of social media as a great form of marketing communication, they are often still trying to figure out how to reach their customers. In conclusion, marketing communication based on social media on the Polish market is at the stage of transition from the birth to the growth phase. ■

Article was written on the basis of the Getresponse reports: Email Marketing Status in Poland in 2013r, Deliotte: Report on the Role of Social Media in Marketing Communication of Capgemini Poland Companies: Polish Companies in Social Media, Millward Brown: Traditional and Digital Media Market 2014, IMMOQEE: own materials.

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# The future of youth cooperation in the Baltic Sea region

Expert article • 1534

The Baltic Sea Region offers a remarkable example of yet rich and varied multi-level and collaborative cooperation, which has no counterpart in Europe or other parts of the world. A distinctive feature of cooperation within the Baltic Sea Region with its intensity and a diversity of forms and subjects, while being loosely formalised on the macro-regional scale, represents both a great asset and a limitation of this cooperation. It is no different in the field of youth cooperation. Baltic youth cooperation lacks a strategic policy framework referring to the problems of the BSR youth. Still, youth affairs and the participation of young people in the BSR cooperation structures is a constant element in this cooperation, ensuring, to some extent, a dialogue between the young generation of the Baltic Sea Region and the decision makers in developing and implementing sectoral policies. Individual Baltic organisations keep this dialogue running, each in a unique way, and there are as many models of dialogue and youth participation as there are organisations. However no form of Pan-Baltic youth organisation is currently in place, and the voice of young people is heard mainly, if not exclusively, at events held by Baltic organisations during annual conferences, summits, general meetings, etc.

**Setting common priorities, goals and objectives**

It seems that, especially at the moment of difficult times for European young generation, the future of youth cooperation depends on the notion of common priorities, goals and objectives. The voice of the young people must be strong and clear to be heard by the policy makers. Therefore, a discussion on the identification of the role and problems of young people in the Baltic Sea Region needs to be now advocated by the young people and the corresponding bodies. Recently, we have seen attempts at creating a wide forum or a platform for cooperation among Baltic youth. In the resolution of the Baltic Sea Parliamentary Conference, which took place in St. Petersburg in August 2012, the Parliaments of the Baltic Sea States are welcoming the organisation of the first youth parliament within the framework of the CBSS Baltic Days in Berlin and encouraging the following BSPC Presidencies to continue this undertaking. This resolution initiated discussion on possible form that such representative of the youth from the Baltic Sea Region should take, just as it happened within the European Union Member States cooperation, where the European Youth Forum is acting very well. This kind of platform would enable young people from the Baltic Sea Region countries, including those who are not a part of the European Union, to shape and express opinions on issues important to the future of young people within their region. Actually, in 2013 and 2014 several meetings supported by the Seed Money Facility were organized with potential stakeholders of the process. Currently, the discussion remains at the stage of working out formulas and structures of cooperation, while the problem of objectives and priorities has been left to a later time. Let's hope that the establishment of the Baltic Youth Forum, or otherwise so-called the establishment of 'the institutional form of youth cooperation in the Baltic Sea Region' will have a significant impact on the situation of young people in the region.

**EUSBSR – a chance for effective policy framework**

Linking the youth cooperation with the EU Strategy for the Baltic Sea Region (EUSBSR) gave us certainly a reason for hope - as the EUBSR was established in order to harmonize and ensure the synergy of different activities, development and the implementation of the common policies within the Baltic Sea Region. We can now only keep fingers crossed on the development of a flagship EUSBSR project, where the youth organizations from the Baltic Sea Region, as well as the representatives of youth networks operating within the pan-Baltic organizations such as BSSSC, UBS, RPB, will all become members of one partnership. The aim of such a project would be to identify the problems of youth in the region and to develop possible pilot solutions for the future use by the local governments and organizations in the co-implementation of their common policies of youth in the region. Taking in mind the difficulty of achieving this goal, it should be noted, however, that the inclusion of young people in a real dialogue and participation is fundamental to the development of democratic structures and the development of a sense of regional identity. In the era of globalization, where there is a lot of pressure on the job and residential mobility surrounded by the variety of choices for life, it is still important to encourage young people to remain interested in the regional issues, to participate in public discourses and to actively participate in decision-making processes in the Baltic Sea Region, as it has become a big challenge for all actors involved. ■

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# Local border traffic between Poland and the Kaliningrad region – international and cross-border determinants

Expert article • 1535

After Poland's joining the European Union structures in 2004 the terms of Poland's relations with the Russian Federation and its organs have been conditioned not only by the reciprocal agreements between the two counries but also by the treaties signed by the EU and RF. Such a legal system also pertains to cross-border cooperation between northeastern regions of Poland and the Kaliningrad Region. As far a Poland is concerned one of the priorities of the international and cross-border cooperation in the Baltic Sea Region is a collaboration with the Kaliningrad Region. So far the legal footing of the cooperation with the Kaliningrad Region has been determined by intergovernmental arrangements, agreements on forming euroregions as well as agreements of regional and local authorities.

In the framework of Poland's admission to the EU the issue of visas for the Russians was a vital one. The consultation on regularizing this issue commenced in March 2000. The both sides of the negotations concurred that the visas ought to be used many times and they ought to be inexpensive. The first of October 2003 was fixed as a date of introducing the visas. On that day Poland denounced free-visa travel on the border between Poland and Russia.

The implementation of the new rules concerning visas influenced significantly the cooperation on the borderland. There appeared additional formalities on the border which occasioned the situation that in the first year of the visas being in force occured a major diminuition of the arrivals to Poland.

Polish authorties perceived it as important that the collaboration with the eastern neighbour in the new internationational and legal framework did not lead to the isolation of the Kaliningrad Region from northeastern regions of Poland. Consequently, EU fostered Lithuania, Poland and Kaliningrad Region of Russian Federation Neighbourhood Programme (INTERREG III A/TACIS) which was in force in the years 2004-2006. The funds of the European Regional Development Fund which were obtained by the warminsko-mazurskie voivodeship amounted to 4,8 milion euros which constituted 14% of the countrie's funds. As far as the money is concerned about 1,6 million euros were designated for the projects concerning the development of tourism and tourism infrastructure as well places of historical interest which have trans-border importance. Over 1 million euros were designated for works on the state border. For instance, for the infrastructure in Elblag harbour. The rest of the funds were committed to the projects dealing with the protecion of the environment

After the first of May 2004 the most significant role in cross-border cooperation between the warminsko-mazurskie voivodeship and the Russian Kaliningrad Region is played by the Euroregion Baltic (despite the contribution of new euro-region ,,Szeszupa" and ,,Lyna-Lawa"). It was mostly created in order to intensify cooperation from bilateral to multilateral.

In the recent years the Lithuania-Poland-Russia EISP Cross-border Cooperation Programme has been a vital project boosting the collaboration of the warminsko-mazurski region with the Kaliningrad Region. Its aim consists in enhancing of the contacts between Poland, Russia and Lithuania through bipartite and tripartite cooperation. The specific objectives are fostering of social and economic development in both countries, interoperability aiming at elaborating attitudes on common challenges and problems as well as supporting interpersonal contacts. The program has been offering support for social and economic development and has been pursuing the objectives of improving life conditions for the inhabitans of the region. Presently there have been 60 projects which have been allocating 100 milion euros.

The new stage in the relations of Poland with the Kaliningrad Oblast was the implementation of laws on local border traffic.

The agreement on local border traffic was signed during the meeting of foreign ministers of Poland and Russia; respectively Radoslaw Sikorski and Siergiej Lawrow. The meeting was held on 14 December 2011. According to the statements of the both sides the arrangement constitutes a significant milestone in the relations between the two countries and enables a further opening up for the cooperation of the Kaliningrad Oblast with the EU in the future.It was decided that the borderland included the whole area of the Kaliningrad Oblast and the same area in Poland that is in Pomorskie voivodeship Gdynia, Gdańsk, Sopot and the following poviats: pucki, gdański, nowodworski, malborski poviat and in Warmińsko-Mazurskie the cities Elbląg and Olsztyn and the following poviats: elbląski, braniewski, lidzbarski, bartoszycki, olsztyński, kętrzyński, mrągowski, węgorzewski, giżycki, gołdapski i olecki. The terms of local border traffic apply to 2 milion people in Poland and 940 000 people in the Kaliningrad Region.

The regulations of the agreement pertain to the whole Kaliningrad Oblast which is an exemption from the customary practice considering as a borderland an area from 30 to 50 kilometres from the border. The agreement entered into force on 27 July 2012. The inhabitants of the borderland wanting to travel more freely may obtain a special multiple exit and re-entry permit.

The agreement on the local border traffic facilitates direct local commercial tourists and other people-to-people contacts. The immediate result of the implementing the regulations of the the local border traffic is on increase of trade flows on the borderland. The introduction of the agreement on the local border traffic is regarded as an outstanding achieremen. On 11 May 2013 Radoslaw Sikorski stated: „thanks to the Russian customers (…) the turnover in our shops in the region which is included in the terms of the agreement has increased by 30%". He added „It strenghtens our determination to eliminate the barriers in the human traffic and to re-establish visa-free movement with all our neighbours including the Russian Federation". In turn, Siergiej Lawrow evaluated the agreement as a positive one.

He said that the free-visa travel of the inhabitants of the Kaliningrad Region and Polish inhabitants of the borderland does not pose any problems.

It ought to be noted that there have not been any serious violations of the rules of the local border traffic. Since the moment of issuing of the permissions for crossing the border there has been an increase in the human traffic and it reached the level of the human traffic before Poland's entering Schengen regulations. ■

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# Fostering sustainability and university networking – a case study from the RCE Hamburg and Region

Expert article • 1536

As outlined by Cooper, Evans and Boyko in Designing Sustainable Cities (2009), addressing sustainability issues in the urban environment is a complex, multi-disciplinary issue, and solutions never arrive from a single perspective. This means that a variety of perspectives is needed. This is especially so if different stakeholders are expected to work together.

The need for a greater engagement of local and regional stakeholders in addressing matters related to sustainable development, is acknowledged as a matter which needs attention, and which needs to be addressed so as to secure a solid basis upon which long-term activities may be undertaken. In attempting to foster networking and encourage the participation of universities and other local and regional stakeholders in sustainable development initiatives, the Regional Centre of Expertise in Hamburg and Region (RCE-Hamburg and Region) was created in 2008. The RCE-Hamburg and Region, which is associated with the Baltic University Programme Centre in Hamburg, has the purpose of acting as a hub to promote education for sustainable development in Hamburg and surrounding region. Its mission is:

"*to foster the cause of education for sustainable development in Hamburg and surrounding region (Hamburg Metropolitan Region) by means of education and awareness-raising initiatives as well as technology transfer, targeted to schoolchildren and adults, as well as special groups such as government employees and industrialists*".

The RCE tries to fulfil its mandate by means of education and awareness-raising initiatives as well as technology transfer, targeted to schoolchildren and adults, as well as special groups such as government employees and industrialists.

The RCE-Hamburg covers a rather limited area in northern Germany, namely the Hamburg Metropolitan Region. It involves the City of Hamburg and a 70 Km radius surrounding it, including districts such as Lüneburg, Stadte, Lüchow-Dannenberg, Lübeck and Lübeck Bay. The work of the RCE is meant to be centred on the use of educational approaches, methods and processes via which awareness about sustainability and education for sustainable development in particular, may be fostered. Ultimately, the RCE is expected to provide a concrete contribution towards a environmentally aware and more sustainability-oriented region.

Operationally, The Regional Coordination Unit (RCU) of the RCE Hamburg and Region is hosted by the Centre of Expertise for Sustainable Construction (CESC), a NGO with extensive expertise in the field of sustainability as whole and which is heavily engaged on issues related to education for sustainable development in particular.

Furthermore, the RCE Hamburg and Region provides expertise, support and practical assistance to teachers and schools facilitating access to training of trainers and co-operation between schools, NGOs, industry, universities and government organizations. In addition to the vital work performed by the Secretariat of the RCE Hamburg and Region, it is by nature heavily dependent on the active participation of the local stakeholders, which are:

i. teachers,
ii. government officials,
iii. NGOs,
iv. Universities in Hamburg and in the region, especially the Hamburg University of Applied Sciences where the Chairman of the RCE is based
v. some local companies (e.g. the municipal cleaning company, a construction centre and the local electricity provider).

The ever increasing interest on matters related to sustainable development in the RCE Hamburg and Region by policy makers, industry leaders, educationalists and academics alike, means that prospects for the future are bright. The challenge and the main task is to ensure all stakeholders and the Hamburg University of Applied Sciences, as a founding member of the RCE Hamburg and Region, intends to carry on fulfilling its role in this regard. ■

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# Crisis taxes – threats and opportunities

Expert article • 1537

During many financial crises there were implemented special crisis taxes which contributed to the revenues of the state budgets in particular countries.

The definition of an anti-crisis tax is the following: these are special statutory charges or levies which are imposed on business institutions during or after a crisis with the aim of alleviating or averting the crisis. The anti-crisis tax instruments are the following:

- lower rates of corporate income tax in the time of a crisis,
- a new capital income tax or an increased rate of such a tax (including a tax on interest on bank deposits) paid by retail clients,
- a special payroll tax on high salaries – imposed on highly remunerated employees or on enterprises which pay such salaries,
- one-off crisis levy on enterprises,
- a tax or levy on financial institutions (e.g. on banks) to raise money for the public recovery fund or the state budget.

The past experience connected with the introduction of crisis taxes gives rise to a number of fundamental doubts, e.g. should the taxes be increased or decreased at the time of a crisis, what type of post-crisis taxes should be implemented and what should they be allocated for.

The experience shows that additional statutory charges and levies should not be implemented during a crisis but during a boom. Moreover, opinions vary as to the benefits and threats of particular bank taxes (FTT, FAT, FSC).

There are a few examples. In 1984 a tax of 0.5% on securities transactions was introduced in Sweden. As it applied solely to transactions on the domestic stock exchanges, the tax was relatively easy to avoid. It was sufficient for the the traders to transfer their operations to other stock markets. As a result, after the introduction of the tax, revenues fell. By 1990 about half of the trade on Swedish stock markets had been transferred to Great British. In 1991 the tax was lifted.

At the time of a financial crisis in Ecuador in 1999 there was introduced a tax of 1% on all financial transactions (FTT) which were made through banks. The profits contributed to the state budget. However, in the situation of a liquidity crunch this tax only exacerbated the situation of banks.

In Poland during the crisis in the 90s there was a tax on high salaries, which was paid by enterprises. The tax was very restrictive, e.g. exceeding the payroll fund by over 5% resulted in a tax of 500%.

In some countries, during the subprime crisis an opposite policy was implemented, i.e. the reduction of taxes. Similarly in Poland during the financial crisis in the 90s cooperative banks were exempt from income tax for a few years.

In 2013 Cyprus faced the necessity of introducing a crisis levy, which was proposed by the European Commission. The proposal provided for a one-off levy on bank deposits of retail customers. This triggered a lot of social protests. P. Krugman stated that the project "was a great blow to the whole banking sector". The evaluation of this kind of tax must be negative – it is de facto appropriation of a considerable part of private capital. The criticism of this model of taxation is based on the following arguments:

- undermining the trust in the banking sector in the whole European Union,
- passing a tax bill which is retroactive,
- dissonance between this levy and the banking guarantee system,
- unequal treatment of people investing in different assets (e.g. real estate),
- ethically reprehensible appropriation of a considerable part of private capital in a situation other than the state of war or another emergency.

The positive evaluation of this project by the European Central Bank is surprising. In the light of the discussion concerning abandoning the "too big to fail" rule in the banking sector and in the conditions of a free market the bankruptcy of banks might be an appropriate solution. Of course, the costs of such an approach would be high.

The subprime crisis gave rise to a discussion about a bank tax as an anti-crisis instrument. A variety of bank taxes have been introduced in 13 EU countries. A draft of a EU directive on the EU financial transaction tax (FTT) has been prepared. Its implementation would cause that in some countries there would be two kinds bank taxes: national and the EU tax, which would lower the competitiveness of banks and increase the cost of credit.

The implementation of a special tax on the financial sector is explained, among others, by the necessity to raise public funds to bail the sector out in the future if a need arises and to improve the financial stability.

A common argument for FTT implementation is the reduction of high risk transactions. However, there is no good methodology or research which would show which tax model would effectively limit such a risk. There is a problem of banks' resilience to changes and their ability to transfer costs on customers.

It is not certain yet if all FTT tax proceeds will contribute to the EU budget (the opposition is increasing) or only to the domestic budgets and if they will contribute to a special recovery and bank resolution fund.

In conclusion – bank taxes will certainly become a part of the tax system of the European Union. If financial transaction taxes are not introduced globally, European banks will find themselves at a disadvantage. Generally, the issue of bank taxes requires further scientific research. ■

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# A BUP motivated system of education for sustainable development in Slovakia

Expert article • 1538

The Faculty of European Studies and Regional Development of the Slovak Agricultural University (SAU) in Nitra is the only faculty in Slovakia which has Department of Sustainable Development in its structure. The department was established by initiative of teachers in 1995, it was not a simple project but an essential structural element of the faculty and also driving force in education for sustainable development (SD). The study programmes at the faculty started to include both strong and soft principles of sustainability (environmental management, regional development, protection from economic disasters etc.). The education has been oriented on rising the environmental awareness of students who, as members of management staffs, will be expected to respect relations between the environment and economical development. The students are educated to make economically effective, socially fair and responsible decisions acceptable from the point of view of SD. At present a problem often faced is formalism in environmental education and education for SD and teachers are more focused on lexical knowledge than on awareness and action. Slovakia is a part of the Baltic Region and it belongs to the Baltic waterscape by its rivers Dunajec and Poprad. The system of development of education for SD has been inspired strongly by the experience of the Baltic University Programme (the National Centre of BUP was established at this university), representatives of SAU attended almost all BUP and BUP-MEdIES conferences on education for SD (e.g. Integrated Approaches to Sustainability – Uppsala 2002, University Education and Didactics – Gdansk 2004, Education for Sustainable Development – Uppsala 2008 and Visby 2009, Residential Training Workshop on Universities & Education for Sustainable Development – Amfissa 2010). The experts of SAU also participated in preparation of course materials for the BUP network (A Sustainable Baltic Region, Environmental Science, Ecosystem Health and Sustainable Development).

The purpose of education at SAU is the creation of knowledge and within this it is necessary to integrate natural and social sciences, economics and arts. A relatively great problem arises from the fact that SD is a multidisciplinary system and the educational system is more or less monodisciplinary. The SAU is oriented mainly on farmers who know environmental and economic principles of agricultural production and therefore many approaches of art subjects were quite new to them. Although it is declared that schools fulfil three basic functions: the transfer of knowledge, the socialization and the development of an individual, we know that the transfer dominates. At the change of traditional education to the education for SD a serious dilemma appears: on the one hand it is expected that the education will be democratic and allow the creation of one's own opinion, but on the other hand it forces the implementation of a specific SD strategy. We use an ecosystem approach in the explanation of environmental relations and the social and economic issues are related to the structure and function of ecosystems (ecosystem services!). The environmental education has been changed towards education for SD and the teachers are considered facilitators in learning for SD.

Students approach the problems of the environment and SD in different ways, depending on the level of the study and study orientation. Problems in education for SD often originate from the fact that the attitudes of the teachers in the eastern part of Europe are often pessimistic (low wages, low social rank, surviving corrupt practices, etc.). In order to improve the work of teachers we have adopted Wright´s recommendations, according to which an education facilitator has to realise his/her imperfections, to decide for change, to identify functional methods, to experiment and test himself/herself and to identify resources for students and himself/herself.

One of the key questions is the methodology of education for sustainable development. This old rule is held to be true: „Tell me – I will forget, show me – I will remember, let me do – I will understand." The individual activity of students is realised by means of their own work such as projects, research activities and studies. In the didactic practice and in the education for SD different creative methods are applied. *Case studies* are typical methods of university education. They are used to investigate real phenomena and this makes them different from some other methods. *Research methods* are also typical methods of university education and are more frequent at advanced levels. They are used for practical training and for the production of seminar and diploma theses. *Problem teaching* is applied only when as the students have sufficient specific knowledge and skills for creative thinking. The work itself is carried out in the form of small projects. *Simulation* or *role games* are typical for the lower levels of study, at the university level of education they are relatively rare. The experience obtained during simulation games enhances the decision making abilities of students. *Effective communication* belongs to the most important of all abilities at which the educational process is aimed (determination of hypotheses, accumulation of information, development of methodological practices, project realisation, final reflections and recommendations for practice). The *summer schools* used to be more practical in comparison with standard university` lectures or seminars (more field work, practical output etc.). The development of creative methods helps students to have an active approach in solving environmental problems when they become direct participants in the process of caring for the environment. ■

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# Kaunas University of Technology – steps towards sustainable university

Expert article • 1539

Aiming to become the leading university, able to compete in the international arena, Kaunas University of Technology (KTU) bases principal activities on its strengths and traditions – links with industry, wide spectrum of technology related studies and research, as well as the latest trends in international development. Kaunas University of Technology, with its 14 faculties, high school (gymnasium), and numerous research centres, is the second largest university in Lithuania. About 80% of Lithuania's industrial engineers have graduated from KTU.

With a new management group in 2011 and the newly developed strategy, the University has focused and concentrated its efforts to the issues of social responsibility and sustainable development. On the platform of previous successful results and expertise, University sees the importance to reorganize University's activities and strengthen cooperation with partners for the unity of economic, environmental, social and cultural objectives and values, identify developmental issues of the city, region and country, constantly develop a systematic education and consulting for companies, organizations and business, support activities within the University that are responsive to the problems of sustainable development of the city, region and country and the quality of life.

The sustainability in every day practise is considered as a priority of on-going "flagship" project "KTU Green University" which involves all the staff and students in the sustainable development of KTU. Therefore, project has started the following initiatives in the KTU: waste (recyclable) management; implementation of green public procurements; efficient energy use; social responsibility and sustainability in the campus (canteens, hostels, etc.), development of sustainable mobility plans. The mentioned initiatives are based on scientific research and activities of researchers and M.Sc. students.

One of the first issues of the project "KTU Green University" was sustainable waste management. The amount of waste generated at Kaunas University of Technology (KTU) in 2011 reached 5 402 m3, its disposal expenses were 131 046 Lt. The majority of that waste (70%) was recyclable – paper and plastic. However, in 2011 the infrastructure for recycling was of very limited scope and most of the waste was going to landfill, as it was a case in the whole country. Waste management practices, corresponding to higher levels within the waste management hierarchy, are under implementation at the University.

The system of separation and collection of main recyclable material - paper waste from the main flow of municipal waste from office buildings was implemented in the framework of project "KTU Green University" and started functioning at KTU since September 2012. The main system actors, an initiative group of the project, established an infrastructure for paper collection on site. More than 600 specially developed boxes where sent and installed in all faculties and office buildings of KTU. Special containers where installed outside the buildings and an agreement (regarding the pickup of collected paper) with the paper mill "Grigiskes" was signed. Informative material on the rise of awareness and information of university members and students was printed and disseminated. Informational events and public presentations of on-going activity were launched by the KTU Students Union. During the first three months of the project, outstanding results of paper waste collection were obtained. More than 14 tons of clean paper waste were collected and transported to the paper mill "Grigiskes". Separation of paper from the main flow of generated waste in KTU made it possible to reduce the number of containers for municipal waste by 25%. Development of a paper collection infrastructure, introduction of economic incentives and further awareness rise will help increase the amounts of collected paper, and according to the targets of the project, in future University expects to eliminate up to 50% of the containers for municipal waste. ■

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# Assessment of sustainable university development

Expert article • 1540

The digest of recent international publications shows that sustainable university development is hot topic for universities in EU countries and worldwide. In order to measure economic-social-environmental-institutional performance of the university, the authors of this paper proposed integrated sustainable development index. The index sums up the development tendencies of the economic, social and environmental settings of sustainable development in general as well as each setting separately. Also, it estimates the relationships between the settings and general university performance. With the intention of evaluating sustainable development progress, the authors carry out study which would help assess tendencies and perspectives of sustainable development at different universities in Kaunas, Lithuania.

As sustainable development is consistent goal, we need to have means how to measure the progress of the university. Economic efficiency doesn't guarantee environmental and social sustainability, therefore the assessment of sustainable development requires integral view, set of multi-dimensional indicators, which assess parts of investigated system and relationships between them. The systemic method of indicator selection should follow the adequate scientific methodology and should assess uncertainty. The method should be flexible, i.e. capable of supplementing or reducing the number of indicators in order to achieve a better evaluation results in the given case. Eventually, in order to promote the progress of sustainable development, strong streamline indicators should be identified and properly applied. Indicators of sustainable development should concentrate the attention on the start of the development cycle. The index takes into consideration local conditions and estimates physical (energy, materials, etc.), human and natural (environmental) resources of the particular university.

The advantage of the proposed integrated sustainable development index is flexibility: it can be applied to any university and any period of time, university is free to choose different aspects to be estimated, it could reflect local conditions, at the same time it gives possibility to compare sustainable development of different universities. For example, if certain aspect of sustainability is no longer relevant for the university, it can be eliminated and substituted by other, and vice versa, if some new aspects important to sustainable development appear, they can be included instead of the former ones or simply the whole calculation system can be supplemented by the larger number of indicators.

Existence of some sustainable areas in the unsustainable world is impossible in the long run, because they are interconnected. If we think about scenario of local sustainable development, both universities and municipalities (communities) must take steps for more efficient use of available economic-human-societal-natural resources. The society is in charge of formulating sustainability objectives, which should be constantly reviewed and assessed. Indicators can successfully measure the degree of progress (in some cases regress) and show efficiency of the measures implemented. Furthermore, the answer to the question: "At what economic expense the development has been ensured?" could be obtained.

To summarize the proposed assessment methodology, it can be said that it has been developed in accordance with the main dimensions (spheres) of sustainable development, which should constitute equal weight in the aggregated index. Only by practical evaluation of sustainable development index it is possible to discover the tendencies of its change and encompass the direction of sustainable development of the university. ■

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# ESDAN – with quality management systems towards sustainability

Expert article • 1541

The Baltic Sea remains the most polluted sea in the world yet has significant importance to the economies of the countries that share the shoreline to this highly vulnerable aquatic environment. In recent years the EU Strategy for the Baltic Sea Region has not only recognized the region's prosperity and dependency on the Sea for economic development based on fisheries, tourism, etc., but also the risk that their economies may be harmed as a result of environmental degradation. As environmental conditions for some sectors deteriorate, other sectors that profit by polluting the Sea grow. Co-operation between nations in the Baltic Sea Region will therefore only function if environmental policies and implementation practices do not allow any country to act as a "free rider" with regard to the sustainability challenges these nations commonly share. Henceforth, correspondence between the drainage basin of the Baltic Sea and the corporate politico-administrative map is of crucial importance. For instance, Russia is currently not integrated in the EU, hence fully in the EU Baltic Sea Strategy, which is why it is necessary that actions also be taken beyond these boundaries.

In the so-called "knowledge society", another dimension is also worth bearing in mind. As business, universities and government agencies become more and more intertwined, it is not only business or agriculture that can be blamed, although some sectors do cause more harm, or even harm other sectors and the environment systematically.

Research and education provide a significant contribution to the region's development, as well as innovative solutions to deal with the present and future sustainability challenges faced by the region. While environmental conditions are under stress, the skills and expertise required to deal with these challenges are in large part not present in higher education (HE) programs. For instance, one Danish study indicates that only 5% of education programs offered at a Danish University take up sustainable development. Against this background, the Nordic countries in general and the Baltic Sea Region in particular should pay much more attention to education for sustainable development (ESD).

The Baltic University Programme (BUP) has long provided a well-developed network for teachers and students to engage in the ESD discourse. As the EU Commission has encouraged member states to use the UN Decade of Education for Sustainable Development (UNDESD) 2005-2014 for ESD implementation, the Nordic Council of Ministers (NCM) has proclaimed its commitment to ESD, and national ESD strategies have been developed in all of the Nordic countries. According to the Nordic countries, the vision is to become one of the leading regions in enhancing the UNDESD. In addition, regional centers of excellence such as SWEDESD, RCE Denmark, and the Finnish SD-Forum in Higher Education have been developed. But while BUP provides a comprehensive platform, with its particular strength lying in its cross-border activities, little has been done to empower the integration of ESD through existing quality assurance systems.

The main idea behind Education for Sustainable Development in Academia in the Nordic countries (ESDAN) was to examine and develop a quality assurance model that better integrates ESD issues. ESDAN, an applied research project, is financed by the Nordic Council of Ministers.

ESDAN is a cross-border initiative that disseminates sustainable development practices, cases and ways of integrating ESD through quality management. The project developed, piloted and tested a model for enhancing ESD with management systems in collaboration between 11 universities from Sweden, Finland and Denmark. Further, the model has undergone pilot-testing by 13 other volunteering universities that were not part of the original project.

Sustainability aspects were screened in quality assurance systems and drivers and barriers for enhancing ESD, as reported by the participating HE institutions, were identified. The objective was to stimulate education that enables graduates to take economic, ecological and social aspects into consideration as future leaders, citizens and decision-makers. This requires development of holistic and critical thinking, and quality assurance systems must be used to support the integration of these qualifications into different disciplinary and cultural traditions. Nonetheless, introducing ESD into the management system could be a way to ensure its integration throughout the university system, where quality assurance is compulsory.

The project found that none of the Nordic countries have included ESD indicators in their HE quality assurance models. While much has been done, it remains to be seen when educational policies and environmental or climate change policies will not only be developed within their respective spheres, but also more fully reflect one another. Today, little or no relation exists between the EU Baltic Strategy, the Nordic ESD strategies, and/or the national climate strategies. This year (2013), however, the Baltic Sea Network on ESD (BSRESDN) came into being, so the discussion on quality assurance as a way to meet one of the enormous challenges in the region, and cross-national as well as inter-sectoral collaboration, may have taken a step forward. ■

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MURAT ZH. NURUSHEV & DANA AIKIO

# Development prospects for trade and economic relations between Kazakhstan and Finland in a short run

Expert article • 1542

Finland decided to join the Charter of the Green Bridge Partnership Programme (GBPP). This was announced by the Speaker of the Parliament of Finland Mr. Eero Heinäluoma at the meeting with the President of Kazakhstan in Astana (Akorda, March 4, 2014), where the prospects for bilateral cooperation and also actual international issues of the agenda were being discussed.

Welcoming the first visit paid by the Speaker of the Finnish Parliament, the President of Kazakhstan Mr. Nursultan Nazarbayev has noted that Kazakhstan is interested in the development of economic and political cooperation between our two countries.

"The achievements of Finland in recent years are impressive. We are ready to adopt your country's practices in the field of education, development and implementation of new technologies. Our industrial and innovative programme offers opportunities for a number of Finnish companies to work in Kazakhstan", the President has highlighted.

In contrast to Europe, Kazakhstan, indeed, possesses 90% of land resources free of chemical and pesticide pollution. This makes it possible to produce "ecologically pure" foodstuffs, which are of high value and demand on the international markets. By means of such projects as "Green Bridge", there is an opportunity to cultivate products using the Finnish technologies, the owners of which will get good income while the Kazakh farmers will obtain new technologies. This means involvement of new projects in the field of renewable energy, production of "ecologically pure" foodstuffs as well as construction of socially important facilities.

The trade and economic cooperation between Kazakhstan and Finland significantly intensified in 2013. Signing new agreements and launching joint projects was reflected in the growth of trade volumes. Thus, according to the Customs Control Committee of the Republic of Kazakhstan, the turnover in 2013 increased by 18,6 % compared to 2012, and reached USD 916,5 mln (USD 669,3 mln exports and USD 247,2 mln imports).

Within the framework of the forthcoming international exhibition "EXPO-2017" to take place in Astana, aiming at increasing of power supply efficiency, stimulating of renewed energy sources and implementing of the power-saving manufacturing plan, the topic "Energies of the Future" is becoming increasingly important. The Republic is rich in traditional fuel types, though, it is vital for the country to build a new energy model based on the renewable sources of energy because of the following two major reasons.

The first reason is the urgent need to cut down the emissions of greenhouse gases and pollutants by the fuel and energy sector, which are caused by burning of fossil fuels (coal, petroleum and gas).

The second reason is the increasing energy deficit as a deterrent factor for the economic development of the republic. The specific value of energy consumption per GDP unit in Kazakhstan is 1.9. This is several folds higher than the same index in the developed OECD member states. High energy intensity has negative consequences, such as low competitiveness of the produced goods and significant pollution of environment. As reported by the experts from the Ministry, Kazakhstan has the world lead in greenhouse emissions related to the GDP (3.38 kg per each dollar of the GDP).

Having ratified the Kyoto Protocol in 2009, Kazakhstan has committed to decrease the greenhouse gas emissions. However, despite the great prospects for using of the renewable energy sources, the share of this sector in the total volume of electric power produced in the country still remains low: 12.5%, taking into account the conventional large hydro-electric power stations, while the share of non-conventional types of renewable energy sources is only 0.5%. For the sake of comparison, the same index (without large hydro-electric power stations) is 29% in Denmark and Iceland, 18% in Portugal and China, 42.2% in Spain, and 10% in the USA, while the renewable energy sources take about 19...20% in the global structure of energy production.

At the same time, according to the expert estimates, the technical potential of the alternative energy production in Kazakhstan is about 1820 bln kWh per annum for wind power only, which exceeds the current needs many-fold. Nevertheless, this potential has been implemented for less than 0.05%. Based on the up-to-date information, the renewable energy sources facilities generate about 423...500 mln kWh per annum.

In compliance with the targets of the State programme for the forced industrial innovative development (FIID), the volumes of electric power produced by the renewable energy sources in 2014 should be equal to 1 bln kWh, while the consumption of "green" power should exceed 1% in the total volume of consumption.

The following trends presently have the best development prospects for the alternative energy production in Kazakhstan:

- Hydro-electric power. The capacity of the existing hydro-electric power stations is 2068 MW, and the annual electric power production is 8.32 bln kWh. The theoretical hydro-electric potential is about 170 bln kWh, whereas 27...30 bln kWh could be produced cost-effectively. The majority of the hydro-electric resources is located in the Eastern and South-Eastern regions of the country. Small hydro-electric power stations (less than 35 MW) are of great importance for the Southern region that lacks energy sources, because such stations have low production costs and exert insignificant effects on the environment. The following rivers of the region have the highest potential for construction of hydro-electric power stations: the Ili, the Charyn, the Chilik, the Karatal, the Koksu, the Tentek, the Khorgos, the Big and the Small Almatinka, the Aksu and the Lensy River. According to expert estimates, the small hydro-electric power stations located in the area will be able to produce about 8 bln kWh per annum and will be capable to fully meet the demand, which is currently being covered at the expense of imports from the countries of the Central Asia.

- Wind Power. Due to the geographical location in the wind belt of the Northern hemisphere and due to strong air streams, Kazakhstan has extensive possibilities for wind power development. For instance, the average annual wind speed in some regions of the country exceeds 6 m/s, which makes them attractive for the development of this branch. According to expert estimates, the wind power potential in Kazakhstan is 929 bln kWh per annum. So far, only one wind power station has been taken into operation: Kordayskaya wind power station with capacity of 1500 kW has been launched in Zhambyl region.
- Solar Energy. The climate conditions in Kazakhstan are favourable for development of solar energy. The experts estimate that the solar hours make about 2200...3000 per annum, and the solar radiation energy makes 1300...1800 kW per 1 m2 per annum. The most suitable places for location of solar power stations are the Southern Kazakhstan and Kyzylordin regions, as well the Aral Sea region.

Taking into account enormous expenses required for facilities of the renewable energy sources to be constructed, as well as for necessary equipment to be purchased and set up, one should consider the possibility for direct financing of projects at the foreign investor's expense in accordance with the following scheme: an investor to a private partner.

In this case the investment risks can be proportionally shared between them, while the investor will be in charge for production costs and the direct site management. Kazakhstan is considering the draft law on certain tax benefits for banks that support "green" technologies. This economic incentive in the first place will stimulate banks towards working out new lending types and, accordingly, towards the development of management and analytical services in the sphere of the alternative power production. Obviously, still more attention should be paid to development of alternative power production in Kazakhstan, as fossil extraction costs constantly grow, while the level of emission of harmful substances remain unacceptably high. It is precisely the comprehensive state support and creation of the economic incentives for investors, which will make it possible to hold a strong position in development of renewable energy sources for the electric power balance of Kazakhstan.

Thus, this article highlights only the tip of the iceberg for the cooperation opportunities between two countries. Most of them can be found in mining industry, construction, eco-tourism (Finnish ecological houses), IT-technologies and many other sectors of the national economy.

Currently, the Institute of Bio-resources of the Eurasian National University named by L.N. Gumilyov, in cooperation with the scientists of the University of Turku (Finland) have submitted a budget-funded application of the following scientific project: "Implementation of the Green Economy Concept by introducing innovations of the Scandinavian countries (using the experience of attracting Finnish technologies to Kazakhstan)" for 2015-2017 based on grant financing. The programme of studies includes the following tasks:

- to achieve the high level of energy efficiency in remotely located areas by introducing renewable sources of energy at the pilot sites which will enable to set up new production facilities (greenhouse facilities and distant-pasture cattle tending), which will increase the competiveness of regions;
- to implement contemporary agricultural methods (so-called "green" technologies) based on the investments and technologies of the Scandinavian countries, which will significantly improve the efficiency of the industry, since the economy of numerous regions greatly depends on this;
- to publish practical scientific recommendations on development of «green economy» by introducing innovation investments of the Scandinavian countries based on the experience of attracting Finnish technologies to Kazakhstan.

Most innovation systems of the Scandinavian countries have to be placed in Kazakhstan reality. Political, economical, geographical situation-those factors have to take into consideration during inputting process. Innovation policy of Kazakhstan is appreciated to integrate new technologies in preservation and in conservation of nature. It will take time and capacitates of both countries for long run period. ■

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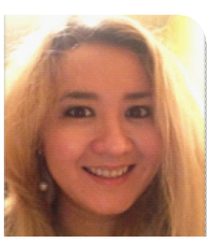

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# Durham and St. Petersburg – university partners

Expert article • 1543

There are not many places in the world which have something special about them, something that ensnares you and never lets you go. The city of Durham is one of them. What makes it unique is its peculiar aura: the tranquillity of the countryside and the bizarreri of a city of world significance. The city possesses England's third oldest University. The University was founded in 1832 and is still developing. It has a collegiate system. Today there are 16 distinct colleges. The teaching departments are devided into three faculties: Science, Arts and Humanities, Social Sciences and Health. The University lists more than 11 000 undergraduates. Students come from over 120 countries. Durham University teaching combines traditional methods, such as personal tutorials, with the most advanced digital approaches.

The author of this article has worked at the Department of Russian for two years and enjoyed it immensely. The Department of Russian is included into School of Modern Languages and Culture, which is part of the faculty of Arts and Humanities. Russian language courses are taught by highly experienced language instructors as well as academic staff. Today, the Russian department has 9 senior lecturers, lecturers, teaching fellows, part-time teachers, one professor and one language teaching assistant. Staff in Russian have particular research expertise in 19th and 20th -century social and cultural history (Dr Byford), 19th and 20th -century poetry, especially Anna Akhmatova (Dr Harrington), literary and critical theory, Bakhtin, Formalism, Russian and Soviet cinema (Drs Renfrew and Radunovic), Russian postmodernism, philosophy and religion (Prof Epstein).

The Department is now home to a Russian World Centre whose Director is Marianna Taymanova, a teaching fellow of the Russian department.

Marianna Taymanova is also a specialist in French language and literature. Marianna Taymanova is an acclaimed translator, whose translations of classic and contemporary French fiction include the works of de Nerval, Dumas, Jules Verne, Apollinaire, Simenon, Foenkinos, Millet, Japrisot. In School of Modern Languages at Durham Marianna's teaching includes Russian language, translation studies and unofficial culture of the late Soviet years.

Prior to coming to Durham, Marianna Taymanova taught French and English at Petersburg State Transport University (Leningrad at that time). Since the time when she started to live in the UK and teach at Durham University the contacts between Durham University and Petersburg State Transport University have been steadily developing, due to Marianna's expertise coordination.

Petersburg State Transport University (PSTU) is even older than Durham University as it was founded in 1809. Today, over 14,000 students study at the University, including more than 500 foreign students from around the world. Annually, the University sends its students for studies and internships at Universities abroad and receives students from Europe, USA and CIS countries. The University graduates work successfully all over the world. Petersburg State Transport University is a huge scientific and research center in the field of engineering, construction and railway operation. The University's lecture-halls and laboratories contain all the necessary equipment that complies with the latest requirements. PSTU takes part in the organisation and hosting of more than 10 scientific conferences, symposiums and workshops on a regular basis. The University has agreements of cooperation in the sphere of education and scientific research with more than 30 foreign partners, Durham University among them. The relationship between the two universities are based on an agreement system according to which Durham students come to Petersburg State Transport University during their year abroad to master Russian, to learn more about the Russian way of life and Russian culture and to work as teachers in our University student groups. They have an opportunity to live in the beatiful city founded by Peter the Great and study at the oldest engineering higher school in Russia. Russian students have an envaluable experience in communicating with English native speakers and get to know English way of life and English culture through them. In turn, the teachers of the Foreign Languages Department have had an opportunity to go to Durham University to gain experience in the English language and foreign language teaching. The teachers of the Foreign Languages department organise regular seminars for the students of the Economics and Social Management department where English and Russian students tell each other about their native towns, their studies and student life. Such meetings help widen students' cultural knowledge and language experience more than anything else. The Durham – PSTU cooperation is a good example of promot-ing Russian language abroad and English language in the Russian community. ■

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# Despite the NATO membership of the Baltic States their exports to Russia grown faster than those of Finland between 2004 and 2013

Expert article • 1544

With the annexation of the Crimean Peninsula to the Russian Federation, Russia wants to show the West that Ukraine belongs to its sphere of interest and that it is ready to use its military power to halt Ukraine's aspirations towards EU integration. Another likely motivation for Russia's military muscle flexing is to increase President Vladimir Putin's popularity among the Russian siloviki, who run the country behind the curtains of managed democracy.

The Baltic States – Estonia, Latvia and Lithuania – have been concerned about developments in Russia since the turn of the millennium and have increasingly questioned whether NATO would come to their aid should Russia exercise military aggression towards them. The Ukrainian case has demonstrated that NATO takes Article 5 of the North Atlantic Treaty seriously and is ready to defend all its members, including the Baltic States, militarily if necessary.

Some experts have argued that Finland's trade with Russia would be gravely damaged as a consequence of Finland's membership in NATO. We can get a hint of the possible impact of Finland's membership of NATO on economic relations with Russia by analysing the development of trade of the Baltic States with Russia following their NATO membership in 2004.

The statistics show that despite the NATO membership of the Baltic States, their exports to Russia have expanded faster than their exports in general. Surprisingly, the exports of the Baltic States to Russia have grown much faster than that of Finland, a non-NATO member, between 2004 and 2013. On the basis of the trade development one can assume that the NATO membership has not significantly decelerated the exports of the Baltic States to Russia. (See the table on the following page)

On the import side, the development is more diversified. Estonia's imports from Russia have grown at a slower pace than their total imports. In fact, Estonia is the only country among the studied nations that has decreased its dependency on imports from Russia. Conversely, Finland's and Lithuania's imports from Russia have clearly outpaced overall imports, thus increasing their import dependency on Russia. Since 2004, dependency on Russian imports has increased by 6 percentage points for Lithuania and by 5 percentage points for Finland. "Oversized" crude oil imports from Russia to Finland explain a part of this increase. To put it differently, Sweden is Finland's largest export destination with a 12%-share of the country's total exports. Oil products account for around a quarter of Finnish exports to Sweden despite the fact that Finland does not produce any oil.

To conclude, the objective of this article is not to promote Finland's membership of NATO, but to normalise the NATO-related discussion in Finland by shooting down the myth that NATO membership seriously damages trade relations with Russia. A look at the foreign direct investment and foreign tourism statistics of the countries in question reveals similar trends, further underpinning the conclusion that, so far at least, NATO membership has not harmed economic relations between the Baltic States and Russia. However, nobody knows what developments the future will bring. ■

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**Foreign trade of the Baltic States and Finland in 2004**

| | Total imports (million) | Imports from Russia (million) | Russia's share of imports | Total exports (million) | Exports to Russia (million) | Russia's share of exports |
|---|---|---|---|---|---|---|
| **Estonia** | 6,703 EUR | 617 EUR | 9% | 4,768 EUR | 267 EUR | 6% |
| **Finland** | 40,270 EUR | 5,318 EUR | 13% | 48,790 EUR | 4,392 EUR | 9% |
| **Latvia** | 3,805 EUR | 332 EUR | 9% | 2,150 EUR | 137 EUR | 6% |
| **Lithuania** | 34,384 LTL | 7,905 LTL | 23% | 25,819 LTL | 2,395 LTL | 9% |

**Foreign trade of the Baltic States and Finland in 2013 (figures for Latvia 2012)**

| | Total imports (million) | Imports from Russia (million) | Russia's share of imports | Total exports (million) | Exports to Russia (million) | Russia's share of exports |
|---|---|---|---|---|---|---|
| **Estonia** | 13,649 EUR | 787 EUR | 6 % | 12,275 EUR | 1,404 EUR | 11 % |
| **Finland** | 58,168 EUR | 10,519 EUR | 18 % | 55,903 EUR | 5,354 EUR | 10 % |
| **Latvia** | 8,793 EUR | 828 EUR | 9% | 6,937 EUR | 791 EUR | 11 % |
| **Lithuania** | 91,521 LTL | 26,827 LTL | 29 % | 84,779 LTL | 16,814 LTL | 20 % |

**Change in foreign trade between 2004 and 2013**

| | Change in total imports between 2004 and 2013 | Change in imports from Russia between 2004 and 2013 | Change in total exports between 2004 and 2013 | Change in exports to Russia between 2004 and 2013 |
|---|---|---|---|---|
| **Estonia** | +2.04 | +1.28 | +2.57 | +5.26 |
| **Finland** | +1.44 | +1.98 | +1.15 | +1.22 |
| **Latvia** | +2.31 | +2.49 | +3.23 | +5.77 |
| **Lithuania** | +2.66 | +3.39 | +3.28 | +7.02 |

Exchange rate per 22.4.2014 (European Central Bank):
1 EUR = 3.45 LTL

Note: this article is not based on a scientific research. In a scientific study, a researcher should neutralise the impact of all the other factors on the foreign trade development in order to assess the impact of the NATO membership on the foreign trade development.

Sources: National statistical authorities and Customs Finland

# BRE REVIEW BALTIC RIM ECONOMIES

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Co-funded by the Baltic Development Forum,
the Centrum Balticum Foundation,
the City of Turku, the John Nurminen Foundation,
the Ministry for Foreign Affairs of Finland
and the Turku Chamber of Commerce

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