

## «We Are Going to Deliver This Report to Dmitry Medvedev»



**Ellis Rubinstein - President and CEO of the New York Academy of Sciences**

**There are countries that have already developed successful innovation systems and those that are just starting developing theirs. What would be the best strategy for governments that plan to develop an effective, full-staged innovation system?**

Newly developing economies and nations, particularly the BRIC nations and other that are trying to begin to compete, they do not have the luxury of waiting for “Silicon valleys” to develop on their own. That is obviously why we ourselves in New York Academy of Sciences provide advice in many settings including to your own President Medvedev. That is why we are building a report, and I will give you an official title, I call it “the race to innovate”. And our report is all about what you are asking.

The challenge for the developing countries is to figure out where is where, how the national government can be helpful in creating, what I would call, regional or urban innovation cluster or communities? The most successful strategy, in my view, as just if you were an investor deciding how to make best of your money, to try to create a portfolio of activities, so that you are not overly dependent on only one strategy. And this is really one of the biggest challenges that are facing leaders now in developing countries. They need to be able to figure out where is where. They will not simply duplicate what already exists and particularly try to compete with countries or cities that are already ahead of them. They will try novel approaches that will allow them to catch up.

One thing that sometime is advantage for developing countries is if they have real resources when they are starting from scratch and leapfrog a lot of old systems that are not helpful any more. So, for that reason, just one example. Many countries are talking about creating universities from scratch rather than trying to reform their universities. This is exiting but also a huge challenge. That would be my general remark about that.

One advantage that they have over developed countries

is that they may be able to leapfrog established behavior by doing things in a completely novel way. For example, creating entirely new universities from scratch rather than trying to reform their old system.

To put it in another way. Just like in the world of corporate competition, sometimes the powerful and large companies have disadvantage because they have so much embedded history and tradition that they cannot innovate easily. That is why small companies often can come out of nowhere as we have seen with companies like Google or RIM, to create a new structure, a new business model that is disruptive and then succeed in actually grabbing market share from all companies. The same principle might apply to developing countries.

**Is this a reason why Russian government, for example, decided to begin from scratch in Skolkovo instead of investing into older structures?**

That is truly what the whole Skolkovo concept is. And it is connected with frustration that some of your leaders have about Russian academy structure. No question about that. It is not easy to succeed, but that is the idea.

**According to you, in order to create a good portfolio of a country there should not be just one strategy. Not only the government should invest in Skolkovo, but also support other innovation centers and research institutes of the old system?**

I would not be that specific. I would say that a brilliant government strategy should involve portfolio of different activities that range from trying something that is entirely novel to trying to take novel approaches to reform the old structures where it makes sense. So, for example, you have embedded industry, old gas and oil industry. It does not mean that there are not innovative ways to convince those companies to try to become leaders in some area of clean energy or clean technology. You have embedded chemical industries. It does not mean you could not find ways to move some of those chemicals to corporate companies into green innovation space. You have great universities that have not operated as innovation system. But it does not mean that there are not clever strategies that one can use instead of waiting for the creation of entire new universities. To be able to reform from within those universities maybe operating from low. Those are the kinds of advice New York Academy of Science is actually is going to try to provide to the Russian government. It is a new report we are working on now and in the future.

**Would you please comment on innovation policies of the countries you are familiar with?**

You are asking me to give the results of the report that we are going to deliver to President Medvedev. Just to give you few highlights and a little bit about that. Our report in particular interviewed roughly 40 experts from all over the world to ask them to help us to identify, along with the literature that other countries have made?

And we ended up concentrating for this first stage on Israel, Finland, US, India, Taiwan, and Russia are as examples. And just to give you a little idea, I could say something of the following kind. Let's take Israel as an example. For 62 years one of its strengths has been that it created a public

– private partnership and a policy reform that encouraged the Israeli people and their entrepreneurial spirit to be innovative. And the result was that it has the highest per capita rate of entrepreneurship in the world. That is known. But that it is success does not mean it has no challenges. One concern that our experts say was that it has over focus on just information technology. The question is will it have long term sustainability if it cannot broaden the portfolio of innovation that is engaging in? It is a challenge for a small country to do that.

Similar case is Finland. Everybody knows it is very unusual national policy that opened the market, deregulated their industry, liberalized their trade and investment and actually provided state agency funding. They were able to encourage the creation of Nokia, IT sector explosion which for a while made Finland economy very strong. But once again, it is not a 100% positive situation because it is a small country. Nokia may lose market share. What does it take to be sustainable over a long run. These are challenges of a small country. And Russia is a large country and it should be able to look beyond. If it could create 3 or 4 different areas of innovation so that it would not be dependent on one or two like Israel and Finland, it would be in a way better shape.

### **Speaking about Israel, was not it the immigration wave in the 1990-s that caused the “economic miracle”?**

It is absolutely no question that the inflow of talent, whether it is to any given city or country, brought huge advantages. In case of Israel Russian talent alone brought huge advantage.

You are getting at a point that I was going come to later. One of the greatest weakness of national policymakers is that politicians cannot think of building structures. They are building cities, building infrastructures and they do not actually develop a community of talent that is going to drive innovations in those structures. So, absolutely correct that one of the Israel’s advantages was the ability to attract new talent and keep it. They also have success in sending their young people to universities outside of Israel and then getting some of them back because they have pride in their country which is, of course, a big challenge for many countries around the world.

Another example of success in that area is China. They did a spectacular job in bringing back roughly 20% of the most talented young people who get trained in the West. They come back to China and establish their own laboratories. There is no question, your point is absolutely correct. One of the most important elements in a great innovation system is talent. You can spend all the money in the world but if you have not fostered entrepreneurial talent you will not have any innovation.

### **Will Russia, like China, in the nearest future be able to bring back its scientists that moved away?**

If Russia invests the energy to get young people to come back, they would. What China did was not a trivial activity. First of all, as you may know, China offered a huge amount of money to people to come back. If young scientists come back they get salaries that are higher than they would have had if they stayed outside China. Second, the universities and individual cities established laboratories with equipment so fantastic that even if they were working in San Francisco, or in a great universities such as Yale or Columbia or MIT they did not have better equipment. In some cases China

gave them better equipment that they even had in the US to work with.

The third factor, that is quite unique, is that in many cases China would not allow the old faculty members to be bosses of these young people who were brought back. They would give them independence, they would give them ability to have their own laboratories, to run their own students without interference from the leadership of the universities. It is quite unusual. Beyond all that, they permitted those young stars to retain half time positions in the United States or Europe in universities where they came from. So this appears to be doing a favor to those other countries. But what it does is that it establishes partnership or alliance with the best global universities and young people do not get isolated when they come back to China.

So that is just four examples of a very visionary policy that came from the top. In fact, I was the first non Chinese journalist to interview Jiang Zemin, the President of China in that time. He said to me straight to my face that his most important goal is to get these most brilliant young scientists of China out into the world even if it was politically difficult for them and bring them back to be the leaders of the next generation.

So if Russia has this kind of visionary devotion to its young people, I do believe it will bring many brilliant young people back who are in the Diaspora.

### **Speaking about the US, in what way the government is involved into innovation system and how does it help new companies to create innovation? How strong the government innovation policy is?**

The biggest single roadblock in my mind is that most countries that are trying to be innovative have what we call the silo mentality where individual universities, individual departments, individual faculty members all live in their little silos and do not operate in partnerships that would create synergy. And they do not get leverage from being allied with other thing. So you find this within universities, you find this between universities in the same city where they will not work together, you find it between the university and industry, you find it between the science and finance communities within a city. So this is what we call the silo mentality. And one of the most crucial policies that any government can do to try to improve innovation system is to create financial and other kind of incentives to break down those silos, to create network and bring people together, and bring institutions together to work for common good. And gain, it is very different from creating a single university in a single place.

I will give you one example. Something that we would like to work on with Russia. That is, while they are building Skolkovo outside Moscow, we would like to try to help them develop mechanism that would identify the most promising areas within Moscow, promote public-private partnership between different institution and create public-private partnership to drive innovation in Moscow region. Basically, Moscow right now is living in a silo mentality.

### **Why in Moscow in particular? What about cities in Russia?**

Same thing for Nijnii Novgorod, same thing for Novosibirsk, same for St. Petersburg. Absolutely, I would think that a good Russian national policy will look at Tomsk and Omsk. What is crucial to the places I have mentioned?

All of them have large number of talented young people. And you cannot create innovation without talented young people. One of the biggest headaches for Middle East, countries like Qatar, Abu Dabi, Dubai, Saudi Arabia, with all that money in the Persian Gulf is that have no students. In Russia you have students, but you are not yet investing the money in putting together the networks of innovation that are needed with young people that have to be mentored, and they have to be taught to be entrepreneurs, they have to learn how to take risk, they have to be supported when they have failures. There should be prizes. All of these things are the things that Russia needs to do.

Right now, one of the most interesting trends that we see at New York Academy of sciences in the world is that world has become like early Renaissance Italy. Instead of thinking about competition between nations you see this enormous competition between the great cities of the world, which all try to capture talent. So, you have Shan High versus Beijing, Deli, London, Paris, New York, Boston, San Francisco. All of these cities have a lot of students and talent. Moscow, Nijny Novgorod, Novosibirsk, St. Petersburg, Mexican city, San Paulo, Buenos Aires could all be in there. This is where the action is likely to be because they have talent.

**But those rich countries in Middle East you were talking about, with all their money they could have attracted scientists from all over the world?**

They are trying to do this a little bit but they have no cultural tradition of welcoming people from other places as equal citizens. They have a bit of a problem with that. You have to have a country that does not only want to bring back most talented people that left it but you also have to have a country that wants to welcome people from other traditions and other societies. Which is why we admire Israel, and why the US has worked so well. Europe is now desperately trying to learn how to bring people from different cultures.

The president of China told me straight in the face: "I think the reason the United States will win against Europe is that I went to Intel and they introduced me to their employees. And I saw people fro, all over the world". This is a single minded idea but it is very important.

One of biggest things that national policy forgets community development. This means that you make sure that you have students, that they are well trained, that they are mentored to be entrepreneurial, supporting them in being entrepreneurial, bringing in the one from other countries. All of that is often forgotten about.

**To your opinion, will Russia succeed in building innovation economy?**

I will be able to answer this question if I am invited spend the next six months or a year working with Russian leaders because I know that there are a lot of smart people that have concept. But there are a lot of great ideas in the world and the proof of success is when something is actually done. So until we see these ideas being put into practice it is very hard to say. For example, I am trying to work with universities in Moscow, to establish new alliances. I talked to minister Kudrin, he has a lot of good ideas, but I need to see what happens to them. I have seen countries that have very exciting start but then they have big challenges. India is a very good example. They have brilliant people imported by the government from the industry, but overcoming

embedded tradition is so difficult. It will take some time to Russia.

As I have already said, In Yaroslavl we will be delivering a report to Russian president Dmitry Medvedev, and that will be the end of what we hope will be a stage one of our partnership with Russia and its leaders. The question for us is what happens after Yaroslavl.

# Newsletter of Institute for Public Planning

**Managing Editor:**

**Mikhail Rogozhnikov.**

**Editor:**

**Aleksandr Mekhanik.**

**Interviews:**

**Marina Vasilevskaya.**

**Design:**

**Allan Rannu.**

