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**Debates about the Russian Innovation Center Project, placed near MBA-School “Skolkovo” in Moscow region, are Ongoing. Is it possible for the cluster to repeat the success of Silicon Valley in the USA – The New Times asked Stanford Professor Mark Granovetter, who has been studying the California Miracle for more than a decade**

*Mark Granovetter – Dmitry Krylov*

**Where successful innovative cluster should be placed?**

Successful innovative cluster should be placed somewhere near major universities. About 87'000 companies, 40 research centers and a dozen universities (the most important of them is Stanford) are located on the territory of the most successful American cluster Silicon Valley. If industries were located 10-40 miles away from the university, it would be much more difficult to connect scientists, engineers and entrepreneurs with each other. And this is a very important element of any innovation cluster development.

When Leland Stanford founded the university in 1891, he wanted the school to work closely with industry. He gave the university a huge land ownership. In 1940s the Dean of the School of Engineering Frederic Terman decided to reduce some of that land and rent it out to new industries. That's how the *Stanford Industrial Park* became a home for companies like *Hewlett Packard* and many other important industries.

However, to choose the right place is a necessary but not a sufficient condition for the successful development of a cluster. It is very important to have frequent exchange of people and information between university and the private sector. Just because you locate a cluster near those universities, there are no guarantees for success.

**— Communications are of utmost importance —**

**What are the components of success then?**

There is no single recipe for developing a region like Silicon Valley. The most important thing about the success of Silicon Valley is that some of the earlier successful industrialists became venture capitalists. They made a model of venture capital, applied it to the hi-tech industry because traditional bankers were not capable of financing in hi-tech, they didn't know enough about the technical aspects, they didn't know people, and they didn't know who is a promising and unpromising person.

Those people, who used to be in industry and who became financiers, knew engineering aspect and people, they had a very substantial network within these industries and that meant that they could react very quickly. In hi-tech you can't spend a year to do due diligence to find out what is going to succeed because by the end of that period the technology has already moved past. As we showed, venture investors rely on their own contacts to receive information about people

and projects. And this information is so valuable because people rely on it and trust it (Ferrary M., Granovetter M. 2009. The Role of Venture Capital Firms in Silicon Valley's Complex Innovation Network. *Economy and Society*. 38 (2): 326-359. – *The New Times*.) Because when you start a business, a venture capital investor gets dozens and hundreds business plans in month and it is impossible for him to read all of them at the same level of detail. About 180 venture capitalist firms, 47 investment banks and nearly 700 merchant banks are placed in Silicon Valley. As we found, on average just 9% of the high-tech start-ups in the cluster are founded by venture capitalist firm at the seed stage.

### **What is the role of the state for hi-tech center development?**

The government can help to develop a cluster. It depends on how bureaucracy is organized, how much do they know, what share of decisions they actually delegate to people who are really close to he-tech industry, how much they are autonomous from the influence of different interests groups. But when we speak about financing by the state the problem is that bureaucrats often don't know about technical aspects, their connections with engineers and scientists are less developed if we compare them with venture capital investors.

The model that works in California is a quite decentralized one. The information exchange and interchange are based on social networks. In China the situation is opposite. Its government delegated some economic functions to the market and to private entrepreneurs, but retained the financial decisions. And China spends enormous sums of money on building universities and laboratories to attract talented people from the USA and Europe.

### **— Innovations need freedom —**

#### **Despite the presence of universities, corporations and the state support, Silicon Valley was not very innovative until 1950s. What has changed since the middle of the XX century?**

The most likely explanation is that the companies developed a special corporate culture which promoted the creative work of scientists, engineers and managers, and also favored their activity to found new companies. Let me explain with an example. In the beginning of 1950s William Shockley invented a transistor which played a crucial role for hi-tech industry development. In 1956 he, John Bardeen and Walter Brattain received a Nobel Prize in Physics. After that Shockley moved to Palo Alto (Informal Silicon Valley capital. Silicon Valley got its name in 1971 due to journalist Don Hoefler. – *The New Times*) to start the semi-conducted firm.

Shockley was a very complicated man but he was a very good judge of talents. That's why he attracted talented engineers all over the country to work in his company at Silicon Valley. However a Nobel laureate was a very bad manager. He wanted to control everything and everybody. Shockley didn't know how to delegate the authority. Hence, in 1957 many talented people left this company, specifically, eight of most talented people ("Traitorous Eight", as they were called).

Those people spun off *Fairchild Semiconductor* and *Intel*, and they managed their firms in a different manner. Specifically, they created egalitarian, more open, and flexible organizational culture. And it became a casual SV model for companies to have such culture.

**Why Silicon Valley is a robust system that has evolved to resist different industrial and economic shocks to maintain its innovativeness?**

The cluster started to enact a special model of interchange between start-ups, large firms, and financiers. They trust each other because they are connected in networks. Small firms are founded very easily if the embedded in local social networks. In other cases small firms do not have any chances to get money.

Another reason is that because of this innovative culture and outcomes, the region became a magnet for talented people from all people all over the world. Over the last 20 years most important innovations were created by engineers from China or India, who were trained at places like Stanford and Harvard.

**Will Russia succeed in building hi-tech cluster from your perspective?**

It will be so, if the government is really serious about setting up hi-tech center, a new hi-tech cluster may appear. The state could provide venture funding for companies as it was in the case of earlier development of California miracle, while private business don't realize their own interest in the cluster. Not only Russia but also many countries will benefit from the fact that the world is multipolar in terms of innovations, because inventors and scientists would compete with different countries, and we would get the fruits of competition.

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**Mark Granovetter** is 67 years old. He is the Joan Butler Ford Professor in the School of Humanities and Sciences and Professor of Sociology at Stanford. Prof. Granovetter is a member of the Silicon Valley Networks Analysis Project at Stanford University (SIVNAP). He is a founder of New Economic Sociology, and Prof. Granovetter is the most cited economic sociologist. He is famous for *Getting a Job* (1974) book and "Economic Action and Social Structure: the Problem of Embeddedness" (1985) article. In Russian were translated two fundamental Granovetter's articles "Economic Action and Social Structure" (2002) and "The Strength of Weak Ties" (2009).

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