

CHALLENGES OF R&D COMMERCIALIZATION IN RUSSIA

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Abstract: This article aims at stating the significance of research and development commercialization in Russia, as well as changes having taken place in this area over the last decade. It also covers major challenges both research and development buyers and sellers face, and namely the absence of linking element between researchers/developers and companies, interaction between Russian science, development and industrial enterprises under the new market conditions, risk of failure, and underdeveloped innovation infrastructure.

Keywords: commercialization, innovations, developed product introduction, innovation infrastructure.

It was back in 2005 when, in an effort to manage the strategic national priorities, the Russian Government made it their goal to develop country's innovation scheme and establish economic conditions necessary for a commercially viable innovative product to enter market. It resulted in booming investments in high-technology companies, which illuminated the Russian large businesses turning towards high technologies. (Российская ассоциация инновационного развития [сайт]. URL <http://www.rair-info.ru/>) However, young scientists, potential men of innovative ideas who are to lay foundation for future development and health of high-technology sector of Russian economy find it difficult to access the market due to unavailability of necessary information and presence of bureaucratic red-tape.

Therefore, the market status is as follows: innovations do occur but only a few of them actually reach the end-user. Besides, foreign companies successfully commercialize products developed by Russians or, at best, enter technology alliances with Russian enterprises.

Commercialization is a process of development and implementation of a number of activities used as a vehicle to commercially promote research and development findings at the goods and services market.

The western development and commercialization is faced with a major challenge which is to find market opportunities, whereas in Russia the issue advancing to the forefront is the absence of linking element between researchers/developers and companies. (Специфика процесса коммерциализации инноваций [сайт]. URL <http://www.nanonewsnet.ru/blog/nikst/spetsifika-protsessa-kommertsializatsii-innovatsii>)

One of the linking commercializers is research institutes which are more or less forced to further the new science for them, aka commercialization of their findings. Every foreign university and every R&D center operating in the market environment does this. However the majority of Russian scientific organizations have a vague understanding of commercialization process as a whole, they are still after introduction of the developed product which in itself is a different facet of innovation management. The key element in our country's innovation development is personnel training, people having the expertise and competence to commercialize developed products, come into contact with international partners, enabling the products to enter worldwide markets. (Николаева, 2011)

There are two parties of a commercialization process. They are buyer and seller. The situation with researcher/developer acting as a seller is fairly clear since the idea of commercializing developed products is gradually becoming the interest of research and development managers. Nonetheless it is not so clear with buyers. Industrial enterprises which are supposed to take up this role, do not consider technology to be a low-hanging fruit. At this point they are still insufficiently motivated to search and introduce new technologies. This yields a second challenge which is the interaction of Russian research, development and industrial enterprises in the new economic environment.

The third challenge is that risk of failure is way too high. Why would you invest money into promoting your own developed product if it is more beneficial to bring a ready-made product or production technology available in the world market? According to some evaluations, the threshold level of a new product market size is \$100, 000 000. The market size of such magnitude in the regional market is hardly feasible.

Speaking of innovation infrastructure development, there is no denying some definite changes, however the manufacturing of cutting edge developed products still remains a weakness in the Russian science life, as it was before in the period of the so-called stagnation.

In Russia there is practically no such business types as venture capital funds and companies which are so common in the West. The number of such firms in the Northern America alone is reckoned by thousands.

The network of Russian intermediate agencies is poorly developed as well. To date there are probably twenty to thirty operating Russian consulting companies specializing in searching and commercializing technologies, and only a few of them are truly active. Most of them are based in Moscow and very often they are part of community and charity foundations or science and education establishments. Some companies gained a good reputation in the Russian market and are worth mentioning hereof. They are Russian Center for Technology Transfer, DKM Venture Projects, Innovation Agency and others. (Проблемы и перспективы коммерциализации в России [сайт]. URL <http://www.techbusiness.ru/tb/archiv/number7/page11.htm>)

In Russia there is a certain number of foreign companies' subsidiaries or representative offices involved in searching and transferring technologies, as well as authorized individuals carrying out projects along this avenue. Their number is difficult to calculate though.

Patent attorney and patent law firms are a minor part of technology commercialization.

Despite all the positive experience, market infrastructure of Russian intellectual property is poorly developed and there is no large-scale technology commercialization in progress.

The USA is an outstanding example of technology commercialization gaining leadership due to the governmental policy. The US research and development is characterized by a multi-sector structure of R&D program contractors and multi-source financing. (Основные элементы инновационной стратегии США [сайт]. URL <http://www.creativeconomy.ru/articles/8576>)

But speaking of policy, it is more of a different view of developed product introduction. It is surprising, but in this particular case in highly pragmatic America the crucial factor is not a product profitability but its societal benefits. Such policy helps new discoveries and technologies to break through the toughest market competition and become beneficial and available to people. We have something to learn here. While we, Russians, are still pondering over the "pains" of commercialization, its costs and ultimate benefits, Americans are taking action.

Today our government is not to prove that science, innovation and new technologies really contribute to economic growth and increase in labor productivity but to find ways to expedite national research and development. First and foremost, it's urgent to find the ways of strengthening and incentivizing innovative activity of our business sector.

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