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Current Situation, Problems and Future Prospect in Innovative Development of Russian Enterprises

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Abstract
Being in the economic transition, Russia is abandoning raw material economy and going on the path of innovative economic development. Against the background of economic transition, this article studies the current situation in innovative development of Russian enterprises both from longitudinal and horizontal aspects, thus further analyze the reasons from multiple perspectives. It is believed in this article that enterprises still remain as the driving force in Russian innovative development while the macro-policies carried out by government play a certain role in the innovation of Russian enterprises but is yet to fully inspire enterprises' initiative in innovative development.

Key words: Enterprise innovation; Russia; Innovation; Competitiveness of enterprises; Economic development; Innovation expenditures; Intangible resources

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INTRODUCTION
After undergoing multiple financial crisis, Russia starts actively to explore the path of realizing transition driving relying on innovative development. Therefore, it is self-evident that the significance of modernization of the national economy for Russia. Advance into modernization is becoming the main content of major national policies and the main subject of related conferences. It also serves as an important way to accelerate Russian economic growth, improve the status of Russian enterprises in global market competition and create better conditions for self-development of Russians.

1. CURRENT SITUATION IN INNOVATIVE DEVELOPMENT OF RUSSIAN ENTERPRISES
Russia's technological power in economy and military suffered from catastrophic damage from the end of 1980s. After the collapse of the former Soviet Union, the government and enterprises cut down their investment in scientific research projects substantially due to the unstable political situation and policies as well as economic decline in a relatively long time. The outflow of top talents caused by bankruptcy crisis of Russian enterprises and social changes lead the innovative activities into a dilemma. Nikitskaya E., a Russian scholar, thinks that the innovative production in Russia's economic growth suffered serious damage in the early stage of economic transition, which from another point of view, also played as a rebirth of Russia's technological structure. (Nikitskaya, 2014) The sustainable development of Russia's economy during the period of transition severely depends on the improvement of enterprises' innovative capabilities. In a bid to sustain national economic security, Russia's innovative development is imperative. The Federal Agency has introduced a series of acts to encourage innovative activities since 1996. However, these measures not only aroused plenty of controversies but also failed to evoke the wave of innovation among Russian enterprises. After President Putin took the office, Russian government attached an increasingly importance to the issue of innovative development with Russia's economy taking a turn for the better gradually. Not until 2008,

did the government start to discuss a series of practical acts concerning innovative development. Afterwards, in 2009, Medvedev, the then president pointed out that "In decades to come, Russia should become a prosperous and strong country which achieves its prosperity and power through intellectual resources, 'smart' economy created by unique knowledge and export of advanced technology and innovative products." (Lu, 2012, June 12, p.10) It was also explicitly stated that the government would support various kinds of innovative development in *Conception of Long-term Economic and Social Development in Russian Federation Before 2020* and *Innovative Development Strategy of Russian Federation Before 2020*.[1] Along with the implementation of national innovative development strategy, Russian government has improved the anticipation of national innovative actions and will further enhance its participation and investment in innovative development in the following five years.[2]

At present, innovative activities of domestic Russian enterprises and various organizations are still not optimistic. It is shown in table 1 and table 2 respectively the numbers of scientific researchers, R&D (research and development) corporations or departments since the foundation of Russian Federation till 2012, from which, it is easy to notice that the number of different types of R&D personnel decreased year by year. Compared with 1992, the total number of R&D personnel decreased by 53%, among which, the number of researchers and their assistants decreased by 54%, that of technicians reduced by as much as 67%, and that of other scientific researchers decreased by 28% accordingly. The number of R&D corporations or departments is reduced by 22% totally, among which the number of research and design departments decreased by 17% and 61% respectively while that of scientific exploration departments decreased as much as 93%. In contrast, the number of old factories, colleges and universities as well as industrial enterprises on the verge of bankruptcy is increasing constantly in recent years, which are inseparable with the macro-control conducted by Russian government.[3] From regional distribution of innovative enterprises, the ones with higher innovation index mainly concentrate in southwestern area, such as vicinity of Moscow, cities around the midstream of Volga River, Yekaterinburg—Perm district and Novosibirsk—Tomsk district.

Table 1
Research and Development Personnel (End of Year; Thou. Persons)

	1992	2000	2005	2008	2009	2010	2011	2012
Personnel – total	1532,6	887,7	813,2	761,3	742,4	736,5	735,3	726,3
Researchers	804,0	425,9	391,1	375,8	369,2	368,9	374,7	372,6
Technicians	180,7	75,2	66,0	60,2	60,0	59,3	61,6	58,9
Auxiliary Personnel	382,2	240,5	215,6	194,8	187,0	183,7	178,5	175,8
Other personnel	165,7	146,1	140,5	130,5	126,2	124,6	120,5	119,0

Note. Russian Federation State Statistics Service www.gks.ru

Table 2
Research and Development Organizations

	1992	2000	2005	2008	2009	2010	2011	2012
Number of organizations – total	4555	4099	3566	3666	3536	3492	3682	3566
Scientific and research organizations	2077	2686	2115	1926	1878	1840	1782	1725
Design offices	865	318	489	418	377	362	364	340
Designing and surveying organizations	495	85	61	42	36	36	38	33
Experimental plants	29	33	30	58	57	47	49	60
Education establishments of higher vocational institutions	446	390	406	503	506	517	581	560
Industrial organizations with research and project designing divisions	340	284	231	239	228	238	280	274
Other	303	303	234	480	454	452	588	574

Note. Russian Federation State Statistics Service www.gks.ru

The Russian government has realized the sustainable impetus of innovation on the economic growth and the crucial role of government in facilitating innovative development of enterprises. As for innovative activities, the government sets an example in the first place so as to mobilize more private innovative activities. In other words, when the government increases its efforts in scientific research, private sectors should be invested with more innovation input instead of being affected by "Crowding-out Effect". (Guo, 2009) Observing Russia's investment on R& D in recent years, we find out that the government has increasingly increased its investment in innovation. With the encouragement of the government,

[1] Concept of long-term socio-economic development of the Russian federation until 2020. Website of the government of the Russian federation (in Russian).
[2] The strategy of innovative development of the Russian federation for the period up to 2020. Website of the government of the Russian federation (in Russian).
[3] Russian Federation State Statistics Service. Retrieved from http://www.gks.ru

enterprises substantially increased their investment in various kinds of innovations so as to achieve their economic targets.

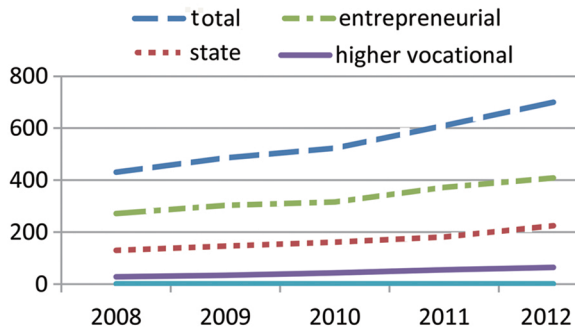

Figure 1
Research and Development Intramural Expenditures by Sectors of Performance (bln. Roubles)

Note. Russian Federation State Statistics Service www.gks.ru

The expenditure of enterprises' funds can demonstrate the trend of their innovative activities. (Xu, 2009). Of the absolute amount, the expenses on technological innovation of enterprises is increasing each year passing by, but the resource investment in technological innovation by Russian enterprises is relatively low, being kept between 1%-2%. From the perspective of expenditure on innovation of small enterprises, they tend to be more active in innovative activities in the field of light industry. As a major production place of world raw fur materials, Russia has a huge demand for leather products inside the country. Besides, the threshold of entering the leather manufacturing industry is low. Thus, it has a relatively high expenditure on innovation of shoemaking industry in the innovative investment of SME with the expenditure accounting for 59% of the total expenditure in 2011. However, in the heavy industry which is difficult for SME to engage in, innovative investment is still focused on large enterprises. The government of Russian Federation, after analyzing the data, will provide tax deduction and exemption as well as supplement preferential treatment of compulsory insurance for small and medium-sized innovative enterprises which cover the businesses of engineering technology and IT.

Intellectual property serves as a vital intangible resource in the innovative development of enterprises. Comparatively speaking, the numbers of applications on the three types of patents in China are basically the same, while the authorization quantity of that for invention is obviously lower than the other two types of patent.[4] However, from the analysis on application, authorization and effective condition of the three patents in Russia, patent for invention is far more than that for utility model or appearance design in terms of the number of applications and authorizations. There are mainly two reasons that lead to this result. First, the high and new technology left over from the period of the Soviet Union has not yet completely out of date, and the older generation researchers of the former scientific and technological power still reserve their research and development capabilities. Second, the competitiveness in commodity market in China is apparently more intense than that in Russia, and the advertisement industry in Russia falls relatively behind China as well. The Russian market has been glutted with foreign finished goods brought in through frequent international trade, as a result, the number of enterprises engaged in trade increases continuously. Nevertheless, most of the productive enterprises are incapable of attaching importance to the innovative activities like product appearance design. The innovative economy to be shaped in Russia's national economic policies renders modern science fused with commerce and trade closely in the innovative system. Although Russian corporations lack the initiative of innovation for the time being, with only 10.4% of them engaged in technological innovation in 2009, 5% belonging to innovative enterprises and 5% of the products belonging to innovative products, they have shown the innovative ethos on the whole and gained certain returns since innovative policies were carried out. From the state of Russia's international technology trade in 2013 shown in the import and export of scientific research and engineering projects take the majority in Russia currently. Therefore, it is verified that innovation of Russian enterprises plays an irreplaceable role in its development of national economy and the improvement of citizens' social living standard.

2. PROBLEMS IN INNOVATIVE DEVELOPMENT FACED BY RUSSIAN ENTERPRISES

Russian enterprises' innovative development is impacted by multiple factors which are roughly divided into two aspects – enterprises' external environmental factors and internal environment al factors. From the factors, we can see that the demand for innovative products is increasing with each passing year, which indicates that enterprises have enough space for innovative development. However, what have played the leading role in hampering enterprises' development in technological innovation are financial factors – Shortage of own funds and Shortage of financial support from the government. One reason leading to this result is the shortage of financial support from the government; and the other is the difficulty for enterprises to apply for loan. Secondly, the country's macro-environment is not favorable for enterprises' technological innovation, either. The risk of everlasting wars strikes a serious blow at enterprises' innovation initiative. And as for enterprises, they are faced with the

[4] State Intellectual Property Office of the P. R.C.. Retrieved from http://www.sipo.gov.cn

increasingly prominent problem–shortage of talents in the innovative development. The factor of "enterprises' low innovative capability" was at the 8th, the 4th and the 5th place in the rank of 1995, 2005 and 2012 respectively, which indirectly demonstrates that the aging of machines and outdated production facilities once severely impeded enterprises' technological innovation. And such situation has been slightly improved under constant investment from various financial resources. Thirdly, the imperfection of legal system plays a more and more important role in impeding enterprises' development of technological innovation; particularly, enterprises' demand for legal protection is increasing year by year in terms of intangible assets like intellectual property. Russian enterprises are confronted with three common problems regarding the innovative development in various fields including technological innovation.

The innovative activities of Russian enterprises mostly tend to formalization and R&D investment standard in products is yet to be increased. The reasons mainly include the following three aspects: Firstly, traditional corporate culture of Russia lacks innovation incentive for general staff; secondly, reform of the educational system fails to obtain an effective result, especially that graduates from technological college grow up slowly in the development of business innovation due to the deviation of their knowledge accumulation with enterprises' goal of making profits; thirdly, under-investment in human capital and insufficient emphasis on human resources result in short innovative impetus of Russian enterprises and scientific research institutions. For example, investment in innovative activities of Russian banking industry was rather small and more Russian or Western banks deceived themselves in terms of innovative activities (Gnativ, n. d.).

The conversion rate of Russia's innovative products is relatively low. Achievements in scientific research by colleges and universities as well as scientific research institution cannot be taken into an effective use. And a large number of achievements are unable to help enterprises make economic benefits rapidly for their separation from enterprises' market orientation.

The protection mechanism of enterprises' innovative products is yet to be perfected. Most of Russian enterprises have not yet formed effective protection mechanisms for innovative products. Enterprises loses the impetus in the work of invention and innovation, the quality of patent somewhat declines, and affiliated agencies conducting related work are forced to be closed. Besides, there also exist loopholes in Russian law in terms of protecting business innovation. For example, during the process of reorganization and privatization reform of state-owned enterprises, national purchasers do not conduct value assessment on intellectual achievements. And in the present basic law of Russia there is no unified method to resolve the problem on review of intellectual property. At the meantime, enterprises do not pay much attention to the review of intellectual property.

3. FUTURE PROSPECTS IN INNOVATIVE DEVELOPMENT OF RUSSIAN ENTERPRISES

For a period to come, the reform of Russian scientific research institutions will continue to be deepened, through which the government may increase its investment in scientific and technical innovation in the fields of biotechnology, health care and chemical engineering, etc., provide preferential policy to SME covering businesses concerning engineering technology and IT, and encourage and support innovative development of domestic enterprises by building "innovation gardens" in the Far East and some urban fringes of European countries. Meanwhile, Russia's scientific research capacity is still mainly reserved in large national institutions, so the conditions for innovative talents to break away from them in pursuit of independent development in Russia are not yet mature. Thus, we can make the conclusion that SME may become activists in service innovation while traditional technological innovation is bound to come into being in the cooperation between large and medium-sized enterprises with colleges and universities.

REFERENCES

Gnativ, V. (n. d.) *Technology of organization of innovative activity in the banking and insurance sector*. Retrieved from http://www.gnativ.ru/innov_in_bank.html

Guo, X. Q. (2009). Russian innovative economic development and policy review. *Heilongjiang Social Science, 2,* 49-52.

Lu, N. Q. (2012, June 12). The twenty years of Russia's economic transition. *Oriental Morning Post,* p.10.

Nikitskaya, E. F. (2014). Forecasting of innovative development: International trends and Russian experience. *Naukovedenie, 22*(3).

Xu, P. L. (2009). Comparison on innovative behavior of Chinese and Russian enterprises: Similarities, differences and reasons. *Research on Russia, Central Asia and Eastern Europe, 5,* 50-56.

Indicators of Innovation in the Russian Federation. (2013). *National Research University - Higher School of Economics (HSE)*. Moscow.