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Building an Innovation-based Economy in Russia: Political claims versus objective reality

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The purpose of this thesis is to evaluate Russia’s President Dmitry Medvedev plan to build an innovation-based economy in Russia. The study has established a logical chain ‘innovation-based growth – entrepreneurship – innovations – business environment’. This perspective helped to reveal the foundation for an innovation-based economy – a favorable business environment. It is argued that without a sophisticated business climate, there cannot be successful entrepreneurship and innovations and hence no innovation-based economy.

Thus the thesis evaluates three reports that assess Russia’s business environment. These are the Doing Business Report (2013), the Global Competitiveness Report (2013) and a Russian Business Climate report compiled by the Russian Union of Industrialists and Entrepreneurs (2014). Regardless of different methodological approaches, all three reports unanimously assert that the business climate in Russia is extremely unfavorable for entrepreneurial and business activities. Russia scored towards the end of the list for the majority of indicators.

Russia’s poor performance can be explained by several primary factors. First, Russia has undergone a traumatic transformation from a command economy to an economy based on free market principles. Second, it is a relatively young state with no collective memory in the society of living under the free market economy. Third, Russia inherited from the Soviet Union a highly misbalanced economy oriented on state procurement and military orders.

The thesis concludes that creating an innovation-based economy in Russia in the nearest future is highly unlikely, particularly due to the unfavorable business environment and unsustainable economic model. The two will always act as impediments for entrepreneurial activities and innovations, and consequently for building an innovative economy. Finally, the thesis suggests to a strategy of first developing a favorable business climate, which will naturally boost and attract entrepreneurial activity.
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1 Introduction

1.1 Background

On November 5th, 2008 Russia’s newly elected President Dmitry Medvedev in his first address to the Federal Assembly announced the four principles of the country’s future economic development. These principles became known as four ‘I’s: institutions, investment, infrastructure and innovation (Medvedev, 2008). Improvement in the first three ‘I’s – institutions, investment and infrastructure, according to Medvedev, would pave the way and create a favorable environment for building an innovation-based economy in Russia. It was declared that from now on Russia’s priority would be creation (and in perspective export) of knowledge, advanced technologies and progressive culture (ibid.). At a later stage these four principles became a foundation for the so-called ‘Strategy-2020’ a second edition of the Russian long-term socio-economic development strategy that concentrated on building an innovation-led economy in Russia, and was released in 2013.

Strategy-2020 is based on two foundations – a new economic growth model and new social politics. A new growth model is necessary, because the old model, based on fast growth of domestic demand and high prices on Russian primary export goods, has exhausted its potential (Mau, Rogov and Yasin, 2013). Accordingly, without the new growth model and more sustainable sources of income, there cannot be new social politics: the Russian economy would have to grow at least 5% a year to realize this new social program. At the same time, growth should not be based only on income from raw material exports and further state controlled reallocation of resources from commodity industries to industries with low productivity but high rates of employment such as healthcare and education (ibid.).

One of the main ideas of the Long-term Development Strategy is a maneuver, which will allow to activate competitive advantages that have not been used previously – relatively high quality of human capital and scientific research potential. Hence, new social politics should consider the interests of the citizens, who will be realizing the po-
tential of innovative development and not only of those, who depend on social security (Mau, Rogov and Yasin, 2013).

In a nutshell, the strategy is built around the idea that the economy of the future will be postindustrial and at the heart of it will be service industries, oriented on development of human capital such as education, healthcare, information technologies, media and design. In some of these areas Russia has relative competitive advantages, but they are rapidly decreasing, due to underfunding and ineffective administration.

The attempt to create an innovation-based economy in Russia represents a worthy aspiration on behalf of former president Medvedev. However, as is often the case with political statements and even with well-elaborated economic programs, they tend to be detached from reality. Therefore this thesis aims at assessing whether the aspirations to create an innovation-based economy in Russia are based on solid assumptions or merely constitute wishful thinking. In other words, could the Russian socio-economic situation as of 2013 realistically encourage a positive change towards an innovation-based economic model? The following sub-chapter will briefly explain how the thesis aims to answer this question.

1.2 Overview

This thesis aims to first identify in chapter 2 what is economic growth and what are the primary sources of economic growth in a market economy. It will be established that the greatest increases in economic growth occurred due to innovation in technology and managerial techniques. Further, economic growth and innovation will be discussed briefly in light of Joseph Schumpeter’s economic paradigm, which sees economic growth as a product of knowledge, entrepreneurship and innovation. This is contrary to the neo-classical view of economic growth, which emphasizes that economic growth occurs due to price-based competition among firms, whose primary goal is to make profit.

It can be said that there is a degree of similarity between Schumpeter’s ideas and the four principles of economic development proposed by Medvedev. Hence if one follows Schumpeterian logic, economic growth occurs when entrepreneurs create something
new through innovation. Additionally, the chapter concludes that the chain ‘economic growth – entrepreneurship – innovation’ would not be possible without a basic favorable business environment, since the processes do not happen in a vacuum and are predominantly shaped by the wider business environment.

In light of the identified importance of a positive business environment for innovation-based growth, chapter 3 will be looking into the issues of the Russian business environment. Firstly, it will be established that Russia is a relatively young market economy, which inherited a very complex socio-economic structure from the Soviet Union. The inherited structure represents a massive barrier to creating a better business environment in Russia in the first place.

Secondly, the chapter will be assessing the Russian business environment according to the Doing Business Report compiled by the World Bank Group and the Global Competitiveness Report created by the World Economic Forum. Their assessments will be complemented by the yearly surveys evaluating the quality of the Russian business environment compiled by the Russian Union of Entrepreneurs and Industrialists. Most statistical data provided in the thesis covers the period of 2012-2013 in order to avoid the extreme figures of 2008-2009 Financial Crisis. Also, sanctions distorted the statistics of 2014-2015.

Finally, the thesis will conclude by evaluating different parts of the Russian socio-economic structure. This analysis will help to identify areas that require particular attention in order to build a sustainable economy with a favorable business climate in Russia. In light of the established definition of innovation-based economy and unfavorable business environment in Russia, it will be argued that creating an innovation-led economy in the nearest future in Russia is deemed extremely unlikely.
2 Identifying the sources of an innovation-based economy

The goal of this chapter, as mentioned previously, is merely to clarify some of the theoretical concepts such as growth, entrepreneurship and innovation. Understanding the basic nature of growth and innovation this chapter will show the importance of the socio-economic environment, which per se defines the success of building an innovation-based economy.

2.1 Technological change as primary source of economic growth

Economists often present growth as an increase in the level of income of a country (Holcombe, 2007: 1). Whereas a country's income is usually measured by totaling up the value added by each firm in the economy which gives a figure for the gross domestic product (GDP), that is, the value of all the output produced by factors of production in the national economy (Dawson, at al., 2006: 23). Hence, “economic growth occurs when the market value of goods and services in an economy increases in one period compared to another, when adjusted for inflation” (Investopedia, n.d.).

There is a wide consensus (leaving the distributional arguments aside) that high levels of GDP and growth in GDP are desirable. Since countries with higher levels of GDP usually have better opportunities to invest in infrastructure, education and healthcare, more people would have jobs and more money to spend, and to boost economic activities in the country (Begg and Ward, 2009: 232).

However, classical income-oriented definitions of growth do not tell much about attaining an innovation-based economic growth. The most one could derive from the given definitions is to look at the percentage share of innovative goods and service in the GDP of a country. Thus it is useful to assess sources that create and affect economic growth.

For example, changes in demographics can affect economic growth. Decrease in population means that there are fewer consumers to buy products and services. It also means that there are fewer people to produce the goods and services. Changes in the
age and gender of people in the workforce can also affect economic growth as preferences and tastes of consumers change, creating new opportunities in the market (Investopedia, n.d.).

Another factor influencing growth is productivity increases. This factor creates economic growth by making products and services more affordable and when products and services are more affordable, demand for them goes up. Hence economic activity increases as more consumers purchase more goods and services (Investopedia, n.d.). Of course, here it is important to mention that the cheap products should meet other consumer criteria such as reasonable quality, convenient placement, and attractive promotion. There are many other factors that can influence economic growth, including the availability of cheap credit, high growth rates in neighboring countries, or low prices for energy resources (Dawson, at al., 2006a, 450; 2006b, 538).

However, throughout history, changes in technology have generated the greatest increases in economic growth. For example, according to Investopedia (n.d.), “the industrial revolution created one of the greatest economic growth periods in history, during which machines replaced humans and animals as the means of production and transportation became faster and less expensive”. This allowed for even greater expansion of economic activities within and among countries (Dawson, at al., 2006: 21; Holcombe, 2007: 11).

Technological change can also take place in management techniques, making workers more organized and motivated, and thus more productive. Throughout the twentieth century, several schools of management were developed. It began with the Scientific School of Management established by Frederick Winslow Taylor, which concentrated on optimizing and simplifying tasks as much as possible so that workers could be taught to perform their jobs most efficiently and almost without thinking (NetMBA, 2010). In this kind of managerial approach humans were used essentially to perform monotonous and similar tasks on a daily basis, similar to machines. Although such practices often led to workers acquiring a repetitive strain injury, the Scientific School of Management was a breakthrough idea that productivity increase can be achieved not only through improvement of machinery, but also through a scientific approach to managing the workforce (ibid.).
Thus technological change in management techniques or machinery allows countries to produce goods and services of better quality, faster and cheaper, boosting the economic activity both domestically and across borders. So the long-term technological change or technological dynamism is what to a large degree determines the economic competitiveness of a country. In fact, there is a whole school of innovation economics associated with Austrian economist Joseph Schumpeter.

In his book Capitalism, Socialism and Democracy, Schumpeter (1996) argued that the primary drivers of economic growth in a capitalist economy are entrepreneurship and innovation. He claimed that both entrepreneurship and innovations are “... incessantly revolutionizing the economic structure from within, incessantly destroying the old one [structure], incessantly creating the new one. This process of Creative Destruction is the essential fact about capitalism” (Schumpeter, 1996: 83). In other words, continuous improvement and adaptation in the production process are the sources of growth.

Schumpeterian ideas are steering the focus away from income-oriented growth theory where the primary role plays the accumulation of productive factors – capital and labor, to an innovation / technology-led growth. Therefore, the objective of an economic policy, according to Schumpeter’s followers, is to foster higher productivity through greater innovation. For that purpose, particular attention should be dedicated to creation and accumulation of knowledge as the primary ingredient for achieving an innovation-based growth. So, policies stimulating both private and state R&D expenditures should be promoted, in anticipation of technological spillovers throughout the economy (Ahlstrom, 2010, ch. 1).

This all sounds extremely similar to the ideas that Medvedev expressed in the beginning of his first presidential term, which became the foundation for Russia’s long-term development strategy. Mr. Medvedev, according to open source, referred directly to Schumpeter only once in 2014, so it is difficult to assert for certain that he is a proponent of Schumpeterian ideas. However, the idea that Russia should rely on and develop an economy of knowledge in order to create a more sustainable growth model is certainly compatible with Joseph Schumpeter’s views on economic development.
As a recap, one could say that this chapter identifies technological change in production and management techniques as factors generating the greatest sustainable increase in economic growth. These changes are primarily achieved by means of entrepreneurship and innovation. Thus, the next sub-chapter aims at conceptualizing these two sources of technological change. Additionally, some initial conditions required for the existence of entrepreneurship and innovation will be assessed.

2.2 Defining entrepreneurship and innovation

There are countless definitions of entrepreneurship, yet there is no common definition that would suit everyone. Therefore, assessing several definitions can be useful to actually grasp different shades of this economic activity. First to coin the term “entrepreneur” around 1800 was French economist Jean-Baptiste Say (Drucker, 1993: 21). According to him, the entrepreneur is the one who “shifts economic resources out of an area of lower and into an area of higher productivity and greater yield” (Say, 1800 cited in Drucker, 1993: 21).

However, this definition does not say much about entrepreneurs and in fact creates some degree of confusion. Is it not so that every business allocates resources in a way that allows it to achieve higher productivity and greater yield? Therefore, can any businessman or businesswoman be considered an entrepreneur? For example, a family buys a franchising license to open a Subway fast-food restaurant that offers fresh sandwiches and is oriented on people, who are concerned about eating healthy. They surely take risk by starting their own business and surely the entire family does best when their business is productive and generates greater yields. Nevertheless, this type of business activity cannot be considered as entrepreneurial even though there is a widespread belief that anyone, who starts own business, is an entrepreneur.

At the same time, Dr. Fred DeLuca and Dr. Peter Buck, who came up with the fast-food concept that allowed consumers to get fresh and made-to-order sandwiches known under the brand of Subway are certainly entrepreneurs. The two doctors did not invent the fast-food industry; they basically produced sandwiches and there was nothing new about that. However, by reorganizing the process of serving sandwiches
and augmenting the product (i.e. keeping sandwiches always fresh and made-to-order), Subway was able to create a new market and new customers. This is entrepreneurship.

So the main difference between an entrepreneur and a businessman or even manager comes down to an entrepreneur’s ability to create something new via a product or an organizational change. This difference is summarized in Schumpeter’s (1965 as quoted in Eroglu, 2011) definition of entrepreneurs “as individuals who exploit market opportunity through technical and/or organizational innovation.”

Renowned management guru Peter Drucker expressed a very similar perspective on entrepreneurship. In his book Entrepreneurship and Innovation (1993: 28), Drucker argued that entrepreneurship is “about taking risk,” whereas the entrepreneur “always searches for change, responds to it, and exploits it as an opportunity.” Moreover, Drucker (1993: 37) believed that continuous disruption of an economy by the new products and new organizational techniques is absolutely healthy and more effective than simple optimization of resources. In fact, it is a central principle of economic theory and economic practice.

Entrepreneurs use a specific tool called innovation, “the means by which they exploit change as an opportunity for a different business of a different service. It is the act that endows resources with a new capacity to create wealth” (Drucker, 1993: 30).

Here are some examples of entrepreneurship changing the economy by destroying the old ways of running business while creating the new ones.

- Internet telephony and Skype are completely different concepts from old-fashioned landline telephony, requiring a different business model and more advanced technologies. This innovation created a technological spillover into other industries making their daily business communications cheaper and more efficient.

- Another Internet based innovation is transformation of physical points of sale into virtual. Today one can buy insurance, a car, or book a holiday trip online.
These changes created a whole new industry of e-commerce, which requires knowledge and understanding of e-marketing and sophisticated tools for its realization.

- The furniture store Ikea has created a high-volume business model for selling affordable furnishings. Their concept is very different from traditional furniture stores — low prices, great design, smooth operation of stores, and a better customer experience all in one package.

According to Gary Hamel (2000: 15), these industry revolutions revolve not simply around products and services, but around new business concepts. In essence, old business concepts are blown up while new ones are created; this change is radical and systematic as in the case of the creation of the World Wide Web, which brought significant change to all other industries.

Thus, returning to the innovation-based economy, one could say that it is a type of economy whose primary factors of growth are entrepreneurship and innovation. Innovation can result from intellectual, creative and developmental activities of people. Hereof, an innovation-based economy is an economy, which specializes in creation of goods and services that require a higher share of advanced technology and managerial know-how for their production. In order to make this growth sustainable, economic policy should aim to foster systematic innovation. Peter Drucker (1993: 35) defines systematic innovation as "a purposeful and organized search for changes, and in the systematic analysis of the opportunities such changes might offer for economic or social innovation."

However, innovativeness of an economy is by itself a dependent variable. Behind any innovation-based economy stands a complex system of socio-economic relations. These socio-economic relations create an environment that influences entrepreneurial and innovative potentials in either a positive or negative way. Thus the last variable in the chain – growth, entrepreneurship, and innovation is the actual environment within which the innovation-based growth is expected. In fact, this variable is so important that, without basic favorable conditions within a country for entrepreneurship, innovation and innovation-based growth are destined for failure. The following sub-chapter
aims to give a brief overview of business and economic environment in light of the already discussed concept of innovation-based growth.

2.3 Conceptualizing business environment

As established in the previous sub-chapters, every entrepreneur is a businessman or a businesswoman, but not every businessman or businesswoman is necessarily an entrepreneur. However, entrepreneurial business and business that relies on already existing technology can be both gathered under the term organization. At the same time, entrepreneurial skills can be learned and there is nothing stopping a conventional business from becoming an entrepreneurial one (Drucker, 1993: 26). Therefore for the sake of simplicity from now on these two concepts can be used interchangeably unless otherwise stated.

Any organization, be it for profit or non-profit, necessarily operates within two environments. First, is internal and it is distinctive within each particular organization and second, the broader external environment that is shared by all the other organizations and shareholders (Cartwright, 2001: 23). And, while the internal environment of an organization might have little impact on economy as a whole, the external environment has a tremendous effect on how the economy works. In fact, the economy is defined by the quality of the external environment within which organizations operate.

Such factors as social, political, and economic stability, cultural and technological development, legal, and environmental practices are all part of the external environment and all in one way or another shape business practices in a country (Cartwright, 2001: 38). All of these factors are tightly intertwined and in different ways influence the favorability of a business environment. Drawing an analogy between nurturing any business idea and cultivating crops here can be useful. Even the most advanced sorts of seeds will not yield harvest without a basic favorable environment with fertile soil, sufficient irrigation, and moderate climate.

Likewise in business if investment in certain industries is not profitable, no one will invest in such industries. And if one decides to invest in an unprofitable industry, he or she will most likely incur losses at least in the short- and mid-term, taking a huge risk.
At the same time if there is no cheap and transparent crediting system within the economy, businesses will not have sufficient funds to invest in development, not to mention settle day-to-day payments. Finally, if the business climate is not favorable for long-term investment and companies have to undergo infinite bureaucratic procedures or in the worst case an organized criminal group can overtake their business, no one in his or her right mind will invest in such an environment.

Each of the factors of the external environment consists of various institutional arrangements, business practices and cultural perceptions that affect people and organizations within the country. For example, in relation to political environment in a country, companies can be concerned with the issue of transparency of government policymaking. Some governments are more likely to act in favor of certain industries than other governments. Biased decision-making can influence some industries negatively while others positively. Sometimes government protection of industries that constitute main source of income for the country is deemed to be necessary, in order to assure economic sustainability for the country. For instance, this is done in gas and oil sectors of large oil and gas producing countries such as Kazakhstan, Russia, Venezuela, etc. (Global Investment Center, 2015: 91).

At the same time, biased government policy can be a byproduct of corrupt government officials who are influenced by various power groups including criminal ones, who have interest in government support of a particular industry. In this situation, political power is used to distort competition in the market in favor of industries and companies that are sometimes not the most effective. Moreover, corruption-based support of certain industries steers attention and resources from other potentially profitable industries, preventing efficient resource allocation within the economy. But most importantly, government policymaking becomes unpredictable, and long-term planning and investment within such a political environment is extremely difficult. It becomes increasingly unclear which forces will influence government policy and in which direction the policy will go, since the policy is not completely guided by the economic interests of the state.

As a reaction to unpredictable and ineffective government policy, international and domestic businesses may decide not to invest in the economy where rules of the game are unclear. Another option for a business would be to try to influence the government
to make decisions favoring this particular business, further spreading corruption and ineffective practices throughout the economy. Essentially, economic activities revolve not around market-based competition, but around lobbying and sometimes open bribing for preferential government support.

This is only one example out of many, which one could draw from the political factor representing the external business environment. Similar cases can be made in relation to legal, economic, or social spheres, which influence the business environment. For instance, if courts are not independent in a country, it becomes increasingly difficult to enforce a contract if a counterpart does not deliver the paid goods. Similarly to the previous situation, if the institution does not work properly, business has the option of engaging in illegal practices or pulling their investment out of the country. In other words, there is always a way of doing business even in countries where there is no legal protection of economic agents by the state. However, the more economic agents within the economy use other means of achieving economic success besides the legally allowed practices, the less effective the economy becomes. In this case, it is no longer purely economic competition based on market forces. And when businesses that are less economically viable receive more preferences than business having better market potential, economic resources are once again being distributed inefficiently. This affects the overall economy and economic practices within the economy as well.

To summarize briefly, one could say that external environment is not so external after all. It is something that business faces on a daily basis in the form of rules, habits, laws and practices within an economy. Based on these practices, business adjusts its own business model so that it addresses the economic reality. When the environment is favorable for doing business, companies are investing their resources primarily into increasing productivity or creating something new. However, when the environment is unfavorable, companies have to invest a lot of time and effort into first overcoming the challenges within the external environment before they can think about business related activities.

Thus next chapter will look at the Russian economic model and its business climate in order to identify how the two influence business and entrepreneurship within the country.
3 Russian economy and business climate

3.1 Russian inheritance

When assessing Russian economic performance and business climate, it is imperative to provide several historical references that would allow the reader to see a more holistic picture. History itself, as noted by Allen C. Lynch (2005: 47), in the form of political, economic, social, cultural, and other historical influences or legacies, “decisively shapes the range of public choice realistically available to leaders and societies.” Therefore, it is important to depict some of the major historically determined constraints for Russia’s further development.

Medvedev became Russian president and simultaneously announced the creation of the innovation-based economy in 2008, immediately following two presidential terms of Vladimir Putin. The two presidential terms of Vladimir Putin from 2000 until 2008 can be designated as a period of political, economic and social stabilization. It is no secret that the vacuum left after the collapse of the Soviet Union in the 1990s was rapidly filled with criminality, humiliation of the least protected social groups, and de facto concentration of state power in the hands of influential oligarchic clans. Market mechanisms and public administration were ineffective, while corruption and shadow economic activities were pervasive. Russia was experiencing a post-transformational crisis, and society learned to live and function anew (Klein, et. al., 2002: 95; Stella, 2003, ch. 1; 2013, ch. 1).

Therefore, Russian citizens supported the state in its legitimate consolidation of control over the country in 2000-2008 after the long-lasting chaos of the 1990s. Tax, budget, and public administration reforms were performed with varying success to ensure that basic economic activities were executed at a tolerable level. The economy was thriving due to a favorable economic environment in the global markets, and particularly due to the high oil and gas prices – Russia’s primary export commodities. Relative social and economic stability were achieved, as two of the most pressing issues were resolved. First, the active part of the military operation in Chechnya came to an end with the defeat of terrorists, and terrorist attacks became a rare event in Russian daily life. Se-
cond, the Russian government was able to lower its foreign debt from 146% of Gross Domestic Product (GDP) to less than 30% in 2008. This was done since the amount paid for debt service in early 2000s was much higher than the actual debt repayment (Federal State Statistics Service, 2015).

It seemed that, for the first time after the collapse of the Soviet system, there was something comparably large and politically potent to fill in the vacuum left by the Soviet state. However, until 2008, the Russian ruling elite did not have a comprehensive long-term socio-economic development plan. Moreover, according to German Gref, former minister of economic development, and Alexey Kudrin, former finance minister, there were few, if any people within the Russian elite, who understood how to run an economy within market realities. Therefore, former president of the World Bank Group James Wolfensohn took the unusual step of bringing a group of economic experts to Russia, who met Putin and his team numerous times to enlighten them about economics and economic policies (Gref and Kudrin, 2015).

This fact underlines once again that Russia inherited from the Soviet Union a society that has no collective memory of living under the free market economy. In addition to that, Russia also inherited a highly misbalanced economy oriented on state procurement and military orders. Once the state was taken out of the equation, the economy collapsed bringing about extreme poverty and “one of the worst humanitarian catastrophes of the twentieth century” (Putin, 2005 cited in Russian International News Agency, 2005). The humanitarian catastrophe epitomized in huge loss of population and internal migration from East to West, leaving whole cities empty and halting the country’s economic activities (Sutela, 2013, ch. 1). After the collapse of the Soviet Union, the Rate of Natural Increase of population was negative from 1992 until 2012, and ranged from the peak of -960,000 to the lowest of 240,000. In this period, the population of Russia decreased by 15 million people, which undoubtedly had a tremendous impact on economic growth in Russia until 2013 (Federal State Statistic Service, 2015). While another 25 million people, who identified themselves as Russians were locked up in the newly established independent states - former Soviet Union members (Putin, 2005 cited in Russian International News Agency, 2005).
There are many other examples of historical developments that have a direct impact on Russia’s current economic performance. However, among the major ones already mentioned are Soviet heritage in the form of economic structure and mentality, and transformational and post-transformational crises in the form of economic stagnation and heavy social consequences. Therefore, when looking at the Russian economy, it is important to keep in mind that Russia is a very young state with no practical and theoretical experience in living within the new realities of a market economy. It is a state that bears a heavy burden from the past in basically all spheres of life, and these accumulated issues of the past are limiting the realistically available choices for future development.

3.2 Russia’s economic model

President Medvedev came to power just as the 2008-2009 Global Financial Crisis (GFC) was starting to spread from the United States to the emerging markets. Before the autumn of 2008, the crisis affected primarily developed countries, but by November, the crisis took effect in Russia. Thus, Medvedev’s plan to reform the economy, which was based on the assumption that Russia is experiencing stabilization and will see further growth in the socio-economic sphere, became obsolete literally at the time it was presented.

The Global Financial Crisis has shown that the dynamic economic growth of the 2000s was not sustainable and led to accumulation of imbalances in the economy. The growth was determined by several factors. First of all, the Russian economy was overcoming the negative effects of the 1990s transformation on its economy. Some of the previously neglected capital and production resources were deployed due to relatively long political and economic stability within the country (Mau, Rogov and Yasin, 2013). This factor in economics is otherwise known as a low base effect - the tendency of a small absolute change from a low initial amount to be translated into a large percentage change (Pollmann, 1996).

Secondly, rising earnings from the export of natural resources and considerable inflow of borrowed capital contributed to the economic growth of the 2000s. In 2000, Russia extracted 327 million tons of crude oil; however, by 2012, Russia was extracting 526
million tons of crude oil, which is comparable to the highest levels of oil extraction in the Soviet Union in the 1980s (Nabiulina, 2012). According to Nabiulina (2012), then minister of economic development, this coincided with oil prices being at their peak values. Her main forecast was that no matter how much more oil Russia produces, it will not translate into economic growth due to the law of diminishing returns. Additionally, Nabiulina (2012), urged to find other growth drivers, since the boom cycle for oil prices was coming to an end, while shale oil and gas presented a credible threat for conventional producers of oil and gas. Nevertheless, while the Russian economy was booming due to the high raw material prices, investment in the economy presented a good risk/reward ratio, which attracted hot capital and simultaneously maintained a high level of liquidity within the economy.

Lastly, real income in the given period grew by some 11% every year, which was almost two times faster than growth of production (Mau, Rogov and Yasin, 2013). As a result of this imbalance, domestic demand was twice larger than domestic supply. This situation led to high inflation rates well above 10% and extending imports that predominantly covered domestic demand. As consumerism spurred economic growth within the country, Russian citizens were enjoying a diversity of goods and services for the first time since goods and food shortages started in Soviet Union in 1987. The consumer market saw a tsunami of domestic appliances and cars of sufficient quality from all over the world at a decent price. In order to somehow restrain influx of highly competitive foreign goods and to protect domestic producers, the Russian Government had to rely on continuous waves of currency devaluation (Nabiulina, 2012).

Collapse of commodity prices and the overall slowdown of the global economy in 2008 led to the return of excess capital from Russia to developed markets, while rapid contraction of income and domestic demand brought down the economy and its financial market. Throughout the course of the 2008-2009 crisis, the Russian economy demonstrated record contraction of GDP among large economies — approximately 8% (Mau, Rogov and Yasin, 2013).

The crisis revealed the heavy reliance of the Russian economy on foreign capital markets and overall global economic conjuncture. Simultaneously, consumption-based economic growth was fueled by rising consumer crediting as the reemerging middle
class that was established in Russia after several years of relative stability was willing to take loans, believing in the soundness of the Russian economic system. Thus, the GFC brought the absolutely irrational consumer paradise as well as the soft credit constraints for Russian state-owned monopolies to an end.

By many accounts (Ministry of Economic Development, 2008; Nabiulina, 2012; Mau, Rogov and Yasin, 2013), this kind of extensive growth in light of other structural problems of the economy such as weakness of institutions and poor business environment would have come to a halt rather soon even without the GFC. The extensive growth of the 2000s had nothing in common with building a stable innovation-based economy, whereas structural problems that had been neglected or unnoticed due to high growth rates remained unresolved, and kept accumulating.

If the above-mentioned growth factors are symptoms of an unsustainable extensive growth model, do these factors allow for a transition of Russian economy to a more sustainable innovation-based growth model? The answer is a conditional yes. In 2009, 85% of all Russian exports accounted for commodities with no value added. Value-add is an extra process, which a company applies to a product that makes it worth more than the cost of its underlying parts (Investopedia, n.d.). For example, oil and gas companies in Russia are primarily concerned with extraction and transportation of crude oil and natural gas. According to Thomson Reuters Kortes, the average cost of one ton of crude oil as of August 2015 was US$242 (Razumovskii, 2015). Instead of exporting the raw commodity, one could refine crude oil and get out of it diesel fuel, fuel oil, kerosene, etc. The total value of products extracted from one ton of crude oil would be equal to US$343, which is some 42% of added value (ibid.). In addition to that, developing refining capability would create extra workplaces, finance research and development, the development of human capital, and possibly create a spillover effect into other industries.

So, why this does not happen in Russia or happens at a relatively low pace? A simple answer would be that there is no trust in the Russian economy. Both domestic and foreign investors see way too many risks and barriers to doing business with Russia. In short, the business environment in Russia is not favorable for doing business, and companies are either facing challenges in establishing new production or extremely
uncertain about business prospects in the country. In fact, it is also widely believed that lacking institutions and barriers to doing business did not allow Russia to translate the extra-ordinary incomes of the 2000s into a solid foundation for a future innovation-based economy (Åslund, 2009). Therefore, one could conclude that both from theoretical point of view mentioned in chapter two, and Russia’s practical experience, building an innovation-based economy without a favorable environment is deemed to be impossible. The following sub-chapter will be dealing with some day-to-day problems that Russian business and society experiences, which altogether mirror the quality of Russia’s business environment.

3.3 Russia’s business environment

3.3.1 Doing Business Report perspective

One way to identify challenges that business faces in Russia is to look at the Doing Business Report produced by the World Bank on a yearly basis. This study reflects ease of doing business or favorability of the business environment across 189 countries. The index for each country is an average of ten indicators such as starting a business, obtaining electricity, trading across borders, dealing with construction permits, etc. For a better visual representation, see Table 1 on the next page. For the period from 2006 until 2013, Russia’s best rank was 92nd and worst was 124th. If this is an average of ten indicators for some indexes, Russia should be ranked even lower than 124th (World Bank, 2013).

Thus, a closer look at the 2013 edition of the Doing Business Report reveals that, for example, in dealing with construction permits, Russia is ranked 178th — close to Tajikistan, Albania, and Azerbaijan. Such low ranking can be partly explained by the number
of procedures a business would have to undergo in order to receive a construction permit from officials. The number is equal to 42 procedures and it is the highest number of procedures among all countries in the study.

Furthermore, it may take a business in Russia up to 281 days to get an electricity connection, which puts the country second to last for this indicator, at 185\textsuperscript{th} place. For trading across borders, Russia is ranked at number 162. Overall score for the year 2013 is 112, and it is achieved mostly due to the relative ease of enforcing contracts (11\textsuperscript{th}) and registering property (46\textsuperscript{th}). However, the results should be taken with caution, since the study assessed only the largest city in a country. In the case of Russia, only Moscow has been studied for ease of doing business, whereas when going farther east of Moscow, the results could be very different. For example, it can be even more difficult to get an electricity connection due to the lack of infrastructure, but easier to get a construction permit.

Some may think that indexes offered by the World Bank's Doing Business Report can be prone to political bias, and ratings for some countries can be purposely lowered. But when looking at the yearly survey about Russia's business environment compiled by the Russian Union of Industrialists and Entrepreneurs (RUIE), one can see that the World Bank's assessments are in fact very moderate. This can be partially explained by different methodological approaches in surveying business between RUIE and the World Bank, since the RUIE runs its survey throughout the country, unlike the World Bank.

Thus according to the World Bank, starting a business in Russia might take up to 18 days, whereas according to the RUIE, in only 39\% of cases one can start a business in the same period of time. According to RUIE, in 61\% of cases, starting a business in Russia takes from 19 to more than 90 days (RUIE, 2014). In 2013, 59\% of Russian business representatives said that it was extremely difficult to start a business in their region, which is 7\% growth since 2010 (ibid.).

Similar to the Doing Business Report, the survey run by the RUIE identified lack of affordable credit despite the key interest rate set by the Central Bank at 5.5\% in 2013, 40\% of respondents claimed that in reality they pay more than 15\% a year in interest.
At the same time, 30% of respondents paid 10-12% in interest payments for their loans (RUIE, 2014).

There is only one instance in which the World Bank report offers worse estimations of the Russian economy than the RUIE. The World Bank claims that the fiscal burden on Russian firms is equal to 51%, while the RUIE claim that this indicator for Russia is at 31%

It can be argued that the overall picture presented by the Russian Union of industrialists and Entrepreneurs is very similar to the one offered by the World Bank. Simultaneously, it can be assumed that the RUIE has closer contacts to business in regions, and thus more realistic information about country as a whole.

Minor differences in assessments do not suggest that from either point of view, the Russian business environment is favorable for doing business. It is no wonder that commodity producers and state monopolies invest unwillingly even into related industries, not to mention innovative sectors of the economy. There are way too many barriers to entry and to doing business in Russia. That is why the state in Russia works as a huge redistribution machine that takes profits from rather effective raw material exporters and allocates them in unprofitable and ineffective sectors of the economy. Otherwise, no sensible manager or entrepreneur would be willing to invest so much time and money in launching a new industry. And as the ongoing currency crisis of 2015 will show, – it is much more profitable — and easy — for large companies to invest their extra export profits in financial instruments and foreign exchange trade than into real sectors of the economy. In other words, betting with taxpayers’ money will be more secure than investing in a business undertaking in Russia.

Although the Doing Business report is a good starting point to understand the business environment in a country, the list of indicators offered in the report is by no means exhaustive. Managers and entrepreneurs take into consideration a much wider spectrum of possible challenges existing in an economy. A more in-depth overview of business climate in a country is presented in the Global Competitiveness Report (GCR) issued by the World Economic Forum (WEF), a Swiss non-governmental organization
famous for its yearly meetings in Davos. Thus next sub-subchapter will be dealing with the Global Competitiveness Report.

3.3.2 Global Competitiveness Report perspective

The GCR is a very comprehensive study of the economic competitiveness of a country, which scrutinizes twelve pillars (indexes) of competitiveness. For a better visual representation, see Table 2 on the next page. The first four pillars represent indicators that are seen as basic requirements for building a competitive economy. These are ‘quality of institutions’, ‘infrastructure’, ‘macroeconomic stability’ and ‘health and primary education’. The next six pillars are called efficiency enhancers, and hence deal with such indexes as ‘technological readiness’, ‘financial market development’, ‘labor market efficiency’, and so on. Successful performance for these indicators is a sign of an economy that is ready to transform into a competitive innovation-led economy. Last two pillars refer to the level of innovative orientation of an economy. The final two indexes look at ‘domestic business sophistication’ (competitiveness) and ‘innovative potential’. Further, each of the pillars is divided into sub-indicators, for example, quality of institutions is an index of 22 sub-indicators like ‘property rights’, ‘public trust in politicians’, ‘organized crime’, etc.

In the 2012-2013 Global Competitiveness Report, Russia was ranked as number 67 with a clear downward trend (in 2011-2012 – 66, 2010-2011 – 63). This is the worst competitiveness indicator among the BRICS countries (Brazil, Russia, India, China, and South Africa). Due to the aim of building an innovation-based economy in Russia, the last two indicators of the report – ‘business sophistication’ and ‘innovative potential’ are of particular interest for this work. For these two indicators, Russia is ranked 119th and 85th, respectively. Calculation of business sophistication or competitiveness is based on nine sub-indicators, and for all of them, Russia scores in the second hundred closer to the end of the list. Similarly, innovative potential of the economy that is still being praised as a possible growth driver is in a dire situation. For availability of scientists and engineers, Russia is 90th in the GCR, for university-industry collaboration in R&D – 85th, and for company spending on R&D – 79th.

The position of the Russian economy in terms of its innovative component can be described as catastrophic. The way Russian companies do business, their competitive advantages, and managerial and marketing techniques, are outdated, and belong to the practices of the developing countries. Simultaneously, the illusion that some 25 years after the collapse of the Soviet Union, Russia still has high innovative potential
represents populist and wishful thinking. Russian science has been underfinanced for decades, and has lost connections with industries and the real economy, while humilitatingly small salaries forced a massive ‘brain drain’ to the West and to service industries (Sutela, 2013, ch. 1). Without serious innovation in business practices and reformation of science, massive investments and most importantly – time, Russia cannot be considered to be a serious innovation-led economy.

At the same time, in a modern economy, the number of factors determining economic and competitive dynamics is growing exponentially. Certainly there are other factors that determine Russian competitiveness, and they are intertwined in a complex system of relations influencing each other positively or negatively.

Unfortunately in case of Russia, different competitiveness factors influence each other negatively, thus creating a kind of self-reinforcing vicious circle. Therefore, when looking at other indicators of the GCR, one can see that bad institutions (Russia is 133rd), financial market underdevelopment (130th place), and quality of management schools (115th place) are inevitably influencing the way business in Russia is done. If market institutions do not work well enough, economic agents would have to find other ways to gain and redistribute profit. Hence a staggering 21% of respondents claimed that corruption is the most problematic factor for doing business, and second is inefficient government bureaucracy — 11% (GCR, 2013).

As with the Doing Business Report, the Russian Union of Industrialists and Entrepreneurs runs a survey that is somewhat similar to the Global Competitiveness Report. However, in the case with the GCR, there are large methodological differences, since the RUIE assesses only the Russian economy and offers results to for each question in as a percentage of all respondents, who answered the question. In other words, all questions do not add up to 100%. This survey looks into the most pressing issues disturbing entrepreneurial activities in Russia each year. See Figure 1 on the next page.
The survey shows a positive trend among the most pressing issues for doing business in Russia when comparing data from 2010 until 2013. However, the five most pressing issues are still mentioned as an impediment for doing business by more than one third of respondents. Each of these five issues translates into ineffective practices of doing business, and thus making the economy itself ineffective. More than half of respondents claimed that the most pressing issue for them is to find a qualified workforce (RUIE, 2014). This means that business essentially does not have human resources of sufficient quality to realize their day-to-day objectives, not to mention investment into
innovative sectors of the economy. There are simply not enough people in Russia with sufficiently good training and skills to pull the country out of dependence on commodity trade. This confirms the relatively low ratings in the Global Competitiveness Report for the quality of the education system (86th) and the extent of staff training (89th) (WEF, 2013).

Simultaneously, business’s criticism of inflation and excessive fiscal burden mirror Russia’s unsustainable economic model, which is not suitable for long-term investments. Fluctuations in prices, often changes in tax and budget policies make the rules in the Russian market unpredictable. Frequent changes in the government regulation do not allow business to stabilize and thus business has to invest additional resources in complying with new norms and regulations. However, in most of the case with good connections it is easier to go around the new regulations by corrupting the officials, which makes corruption fourth most, pressing issue for doing business in Russia (RUIE, 2014).

3.3.3 Business environment what should be done?

Regardless of the methodological differences between the three reports there are no grounds to assume that one of the reports is more biased than the other. Scrutinizing the Russian economy from different perspectives, the reports come to very similar conclusions – the Russian economy and society are in urgent need of reforms. Russian economic growth is absolutely unsustainable, whereas conditions for its improvement are essentially non-existent. Bad practices essentially reinforce each other making change within the socio-economic sphere barely possible.

The pompous growth of the early 2000s was possible at the cost of creating imbalances due to high oil prices, fueling consumer crediting and the effect of the low base, and now results in diminishing returns. The Global Financial Crisis revealed that the structure of the economy and business practices in Russia are far less effective than those in the developed capitalist economies.

There are rapidly degrading competitive advantages in the form of the Soviet economic heritage. Depreciation of capital assets in Russia is equal to 50% (in some industries
up to 80%), whereas average for the BRICS countries is 35%, Germany - 16%. But above all, the society itself is not ready and is not able to produce a considerable change in the way institutions and businesses in Russia work. Out of 143.5 million people who lived in Russia in 2013, only 24.5 million did not live during the Soviet Union and traumatic 1990s. For the rest of the 119 million people, concepts such as good business practices, property rights, inflation, and government transparency are alien concepts. None of them existed during the Soviet period, whereas in the chaos of 1990s, the concepts were simply inapplicable to the economic situation within the country.

It is not surprising that all three reports unanimously assert that the business climate in Russia, as it is understood by the developed capitalist economies, is extremely unfavorable for doing business. But can the Russian government do anything to turn the situation around? This question is beyond the scope of this work, but nevertheless it is important to recapitulate some of the policies that could potentially improve the situation with the Russian business climate.

Before looking at particular measures, it is worth mentioning that any economic program cannot be unsystematic, and it should encompass a wide range of issues, including monetary and budget policies, private property practices, manager-employee relations, etc. All the variables can be adjusted in various ways to provide initiatives and improve conditions of different social groups and industries with a purpose of getting a certain positive outcome (Glaziev, 2015). In other words, new socio-economic policy would require redistribution of wealth, initiatives and, probably, influence throughout the economy.

However, Russian oligarchs and the ruling elite are not interested in such a change, because it would mean that they would have to lose their privileged position within the socio-economic structure of Russia. So by some accounts, positive change is also impossible due to the ruling elites doing everything to maintain the status quo (Khazin, 2015). Developing an innovation-based economy would mean steering some of the resources from Russian traditional export industries to innovative sectors of the economy.
But even if the Russian elite would suddenly realize that the country needs to be reformed and that it is in their best interest for the economy to prosper, where should one start the reformation process?

The head of the Institute for Industrial Production of the Russian Academy of Science, Alexeev Alexey (2014: 369), calculated a correlation coefficient of each of the pillars of the Global Competitiveness Report to GDP per capita. Out of twelve pillars of competitiveness, seven should have a particularly high correlation with GDP per capita. These are: quality of institutes, infrastructure, higher education and training, goods market efficiency, technological readiness, business sophistication, and innovative potential.

Then, by creating a diagonal matrix of paired correlations (each pillar with each pillar) he found the strongest links between the competitiveness pillars. Thus, quality of institutes is strongly connected with the market of goods and services. A bit weaker link is between quality of institutions and business sophistication and innovative potential of business. Infrastructure and higher education and training are closely related to the level of technological readiness, sophistication and innovative potential of business (Alexeev, 2014: 371).

Then Alexeev (2014: 372), suggests following the logic offered in the Global Competitiveness Report 2012-2013, which goes as follows:

While we report the results of the 12 pillars of competitiveness separately, it is important to keep in mind that they are not independent: they tend to reinforce each other, and a weakness in one area often has a negative impact in others. For example, a strong innovation capacity (pillar 12) will be very difficult to achieve without a healthy, well-educated and trained workforce (pillars 4 and 5) that is adept at absorbing new technologies (pillar 9), and without sufficient financing (pillar 8) for R&D or an efficient goods market that makes it possible to take new innovations to market (pillar 6).

So, using the same logic it will be reasonable to assume that institute determine efficiency of the goods and services market not vice versa. Indeed, if a market has inconsistent and unclear rules of the game it is difficult to expect that market for goods and services will be functioning as efficiently as it does in the countries with more adequate
institutes. However, it is also true that development of the goods and services market require consequent change in the institutional framework. Nevertheless, development of markets will not go far without sufficient institutional framework, which is why institutions should be developed first and only then the goods and services market (Alexeev, 2014: 372).

The same logic applies to the chain ‘infrastructure – higher education and training – level of technological readiness’. First, one should establish developed infrastructure and sophisticated quality of education and only then corresponding level of technological development will emerge.

Thus according to Alexeev (2014: 372), institutions, infrastructure, higher education, and training are the core issues and the first to be addressed if one wants to create a competitive and innovation-based economy. At a later stage, successful resolution of issues related to the goods market and level of technological readiness must be addressed. Lastly, level of innovative potential and sophistication of business will result from the way previous issues have been solved.

Even without Alexeev’s analysis, Russia has seen numerous periods in its history without a clear institutional framework. This happened in 1917 after the revolution and again in 1991 after the collapse of the Soviet Union (Klein, et. al., 2002: 67). Therefore understanding within the Russian elite that it is impossible to build any kind of economy without creating an institutional framework should exist on the level of collective memory. And if there is no such understanding, it says something about the quality of the current Russian elite.
4 Conclusion

The goal of this work was to assess whether or not Russian socio-economic conditions as of 2013 allowed for creation of an innovation-based economy. The thesis established that an innovation-based economy is a type of economy whose primary factors of growth are entrepreneurship and innovation. This type of economy creates goods and services that require a high level of advanced technology and managerial knowhow. Simultaneously, by deploying advanced technologies and managerial expertise, entrepreneurs create new technologies and managerial practices, thus reinforcing the growth cycle.

However, the existence and success of entrepreneurship and innovations do not occur in a vacuum, and depend on the external business environment of a country. Hereof the goal of an economic policy within a country is to create conditions for smooth and barrier-free operation of businesses within a clearly defined legal framework. This framework essentially rests among others on political, economic and social stability. Thus transparency and stability of the business’s external environment would theoretically allow entrepreneurs to concentrate on the creation and realization of innovations within the economy.

The thesis has revealed that this is not true for the Russian business climate. Starting with the basics, it was established that the current economic model is not sustainable and is not suitable for long-term investment. Since business does not believe in longevity of the Russian economy, it is mostly speculative in its essence, hence the business is not interested in improving the quality of the environment. The goal of the speculative capital is to reap the benefits and exit with profits.

The rapid economic growth of the 2000s was determined primarily by three factors: favorable economic conjuncture on global markets, consumption- and credit-fuelled growth, and the low base effect. None of these factors was directly controlled by Russia; on the contrary, the factors simply coincided with the period of relative stability in Russia itself. When the situation with global markets turned negative in 2008, Russian economic growth changed accordingly.
Simultaneously, domestic and foreign business in Russia has to take into account various risks directly unrelated to business operations and economic environment. These risks permeate all spheres of doing business in the country as established by the Doing Business Report, the Global Competitiveness Report, and the Russian Union of Industrialists and Entrepreneurs surveys. To mention a few, corruption, inefficient government bureaucracy, inadequately educated workforce, and poor infrastructure are significant factors in the business equation. Legal business in Russia is being squeezed from all possible sides by the negative factors of the external environment. The business spends a lot of time and efforts to overcome the challenges of the unfavorable business environment instead of concentrating on business related activities.

Within such a business environment, it is deemed impossible to develop any kind of business, not to mention an innovation oriented one. It can be argued that Medvedev’s four I’s - institutions, infrastructure, investment and innovation are mentioned in the right order. First, Russia should create conditions for doing business in the country in the form of transparent and effective institutions and good infrastructure, and only then invest money into innovative growth drivers. Otherwise, this investment will not produce the desired result, and will be simply wasted.

Setting such a high standard for building an innovation-based economy only 18 years after the traumatic collapse of the Soviet Union seems a very formidable task in light of already established facts about the Russian society and economy. It would be reasonable to first refresh current industrial and research potential before investing time and effort into development of disciplines and industries about which Russian society has only theoretical knowledge.

Developing institutions and infrastructure should be an absolute priority, but it might take a long time before one sees the first signs of well-functioning market institutions in Russia. Perhaps it will not happen under the current government, nor under the current president, but it is an obligation of the current elite to sow the seeds for future institutional development.

Russian Prime Minister under Nicholas II, Pyotr Stolypin (1907 as quoted in Sputniknews, 2012) said: “... give Russia 20 years of inner and outer peace and you won’t
recognize it.” History has taught Russia that there will never be 20 years of stability, and hence Russia is destined for uneven and sporadic economic growth in the upcoming turbulent decades. There are simply too many things that need to be fixed.
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