Innovative activity of small and medium-sized enterprises in Kazakhstan and factors of its development

Abstract
Today, there is a need to shift from the export-oriented economic model to innovative economics in Kazakhstan. According to innovation indices, the State is significantly lagging behind other developed countries. The Republic of Kazakhstan can become competitive by shifting to a new model of economic growth and by rapidly reducing the backlog. The State needs an effective strategy for growth through innovation by implementing the development of commercial innovation. In this paper, the authors conduct a statistical analysis of indicators of innovative growth in the Republic of Kazakhstan. The indicators were compared to those of technologically advanced countries, in particular to indices, such as the share of innovation-active enterprises, domestic spending on research and development (percentage to GDP), total researchers equivalent per one thousand of the working population and the amount of researches conducted. As a result of the present study, the authors have determined the key factors that have a major influence on the innovative activity of SMEs.

Keywords: Innovations; Innovative Activities; Small and Medium-sized Enterprises; Republic of Kazakhstan

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Currently, the economy of the Republic of Kazakhstan is showing an unstable economic growth and is still oriented to economic instability. Nevertheless, for the past decade Kazakhstan has shown very good economic performance: the collapse of the Soviet Union was later followed by a sharp decline in the volumes of production which led to economic instability. Nevertheless, for the past decade Kazakhstan has shown very good economic performance: the annual growth rate of GDP averaged 10% in the period of 2000-2007. The growth stopped in 2008 due to the negative impact of the world economic crisis on external financing and decreasing raw material prices. After a sharp decline in 2008, the economy had recovered only by 2014 when GDP increased by 4.3%.

In 2015, low oil prices and hard terms of accessing finance led to a 1.1% fall in the GDP again, which creates geopolitical tension. The mining of raw materials has given an impulse to the growth of Kazakhstan’s economy. As a result, the government has stressed on the necessity to develop other dimensions of growth and gain an economic competitive advantage. As a solution to the problem of enlarging the dimensions of economic activities, resources are given in order to modernize the economy and reconstruct the infrastructure.

Nowadays, the share of innovation-active enterprises of all enterprises in Kazakhstan is equal to 8.1%. In comparison, such shares make up to 50% in the USA, while Germany (79.3%), Sweden (60%), Finland (58%) have the highest shares among the EU countries. The average share of innovation-active enterprises in the European Union is around 53% [3].

In Kazakhstan, innovation activity of all enterprises of the real economy remains very low. Innovative entrepreneurship doesn’t define the overall economic climate relevant to SMEs: in 2014, the contribution of SMEs to the economy made up to 1.5% [4].

Currently, the economy of the Republic of Kazakhstan is showing an unstable economic growth and is still oriented on the mining industry. This restricts transformation to a new quality level of economic development and implementation of innovative reforms in the economy to gain a competitive advantage and slows down positive structural changes. In times of economic stagnation caused by fluctuations on the raw materials markets, further integration of economic reforms makes it possible to turn Kazakhstan into a competitive and innovative economy. In order to realise these opportunities, it is important to set innovation goals, formulate institutional terms and mobilise the innovative potential for a successful transformation.

2. Brief Literature Review

Many economists and practitioners focus their attention on the scientific support of innovation management in the economic and social spheres. Individual theoretical and practical aspects are considered in the works by Bianchi et al. (2010) [5], Jenkins (2009) [9], Acs et al. (1997), Edwards et al. (2005) [8], and others. Krasikova et al. (2014) [11], Kurmanov et al. (2015) [12], and others have made a great contribution to the theory of innovation within the changing paradigm of higher education. Kazakh scientists, among whom are Dana (2010) [14], Radosevic and Myrzakhmet (2009) [15], Smirnova (2013) [16], also try to determine factors that impact the innovative activity of SMEs. However, a significant number of scientific issues related to the effective state management of innovative processes within the economy remain outstanding in the context of Kazakhstan.

3. The purpose of the study is to determine key factors that have a major influence on the innovative activity of SMEs in Kazakhstan.

Methodology

This Research was done to measure the variation of the economic development and innovation in Kazakhstan in times of increasing global competition. In order to assess the key factors which have an impact on the innovation activity of SMEs, the authors used statistical data provided by the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan. The results of the research were derived from: the sample group analysis of 24,068 SMEs in 2014 and 8,022 SMEs in 2004 SMEs holding their activities in the Republic of Kazakhstan, statistical data, expert’s opinion on the innovation potential of the State.

4. Results

Since the beginning of industrial and innovative development in 2003, Kazakhstan had reached the peak of its main innovation activity indicators by 2014. This growth was caused mainly due to successful realisation of the State Program for
Accelerated Industrial Innovative Development of the Republic of Kazakhstan in 2014.

In the same year, the share of innovation-active enterprises increased from 3.4% to 8.1%, if compared to 2005 (Figure 1).

In comparison, the shares of innovation-active enterprises make up to 50% in the USA, while Germany (79.3%), Sweden (60%), Finland (58%) have highest shares among the EU countries. The average share of innovation-active enterprises in the European Union is around 53% (Figure 2) [3].

Research and development expenses are one of the main indicators of innovation activities. The USA (USD 415 billion), China (USD 208.2 billion), Japan (USD 146.5 billion), Germany (USD 93.1 billion) are the leaders by this indicator (Figure 3).

It is necessary to mention a quick growth of research and development expenses in China. Compared to 2008, this indicator has increased by 1.7 times. Kazakhstan is lagging behind technologically developed countries on the scale of research and development expenses. However, compared to 2011, the growth of expenses on research and development (61.7 billion KZT) was 42.5% in 2013 [3].

The largest shares of research and development expenses in GDP have Israel (4.38% of GDP), South Korea (4.03%), Finland (3.78%) and Japan (3.39%).

It is necessary to mention that according to the Europe 2020 Strategy, increasing expenses on research and development in the European Union (EU), up to 3% of GDP, is one of the five general target indicators. In 2011, the average indicator in the EU was 1.94%, which was higher than in China (1.84%). Among the other European countries, Finland has one of the highest indicators (3.78%). The indicator of research and development expenses of GDP in Kazakhstan is still low and comprises 0.17%. However, it is necessary to mention that the local science system is at the start of its development.

According to number of researches performed by R&D, Kazakhstan is lagging behind many foreign countries (Figure 4).

According to the number of total researches per one thousand of the working population, Finland exceeds Kazakhstan by 12.2 times, while South Korea - by 9 times and Singapore - by 8 times.

Nevertheless, according to the local statistical data of 2013, this index has increased by 59.5% (up to 17,195 people), if compared to 2008.

It should be noted that the innovation development in Kazakhstan is restrained by the lack of personnel, capable to manage innovation processes and projects. Despite positive statistics in the scientific sector, science staff in Kazakhstan requires effective State support and additional stimulation.

Low involvement of SMEs in Kazakhstan in the implementation of innovations urges the need to determine the relevant factors and take measures to develop innovation-active processes at SMEs.

Table 1 contains data on evaluating factors affecting innovation activities in the period of 2004-2014.

10-year data demonstrate changes in SMEs opinions related to factors influencing SMEs opportunities in carrying out innovation activities.

According to the obtained data, the most critical factors detected by enterprises were the lack of financial resources and the shortage of competent personnel. These two factors were...
mentioned by 41.4% of the surveyed SMEs in 2014 and by 21.9% of SMEs in 2004.

In 2004, SMEs were highly dissatisfied with loan funds. In 2004, 272% of respondents mentioned high interest rates of loan funds. However, in 2014, only 3.2% of the surveyed SMEs emphasised the shortage of financial assets, restricting innovation activity.

High economic risks related to the implementation of innovation were determined as one of the significant factors (in 2004 - 9.9%, in 2014 - 20.2%).

The following matters for innovation led by SMEs are essential: they find it unnecessary to implement innovation due to the lack of demand for innovations (with 34% in 2014 contrary to 10.4% in 2004) and earlier innovations (with 6.9% in 2014 as opposed to 18.8% in 2004).

Another crucial matter was the lack of information on new technologies, and undeveloped corporate communications. Such problems were highlighted by 1.7% of SMEs in 2014 compared to 14% of SMEs in 2004.

5. Conclusions

The conducted analysis has shown a very low innovation activity of small and medium-sized enterprises in Kazakhstan compared to other countries. Business communities shall recognize that companies' ability to implement innovations can be a powerful trigger to competitive advantage and process effectiveness, which are so important for small companies which have the understanding that research and development expenses are investments into future development.

It is important to note that all factors determined in this paper were also listed by other researchers and experts, which only confirms the importance of the relevant issue. Low innovative activity of SMEs together with growth factors must be re-evaluated by the government. The implementation of effective financial mechanism, training and development of personnel, amendments to laws and regulations, development of small and medium-sized enterprises are impossible without institutional changes with regard to not only innovation-led enterprises but also to businesses in general.

References


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