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THE RESEARCH ON KEY COMPETITIVENESS FACTORS OF THE ECONOMY AND AGRICULTURAL EXPORT OF KAZAKHSTAN

The article discusses the competitiveness of Kazakhstan in relation to its export potential. The analysis and the assessment of agriculture development and the quality of its infrastructure have been performed. The paper defines and analyses Kazakhstan's position by all indicators in the Index of Global Competitiveness by the World Economic Forum.

Keywords: competitiveness factors; agricultural export; infrastructure; World Economic Forum; Index of Global Competitiveness.

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ДОСЛІДЖЕННЯ КЛЮЧОВИХ ФАКТОРІВ КОНКУРЕНТОСПРОМОЖНОСТІ ЕКОНОМІКИ ТА СІЛЬСЬКОГОСПОДАРСЬКОГО ЕКСПОРТУ КАЗАХСТАНУ

У статті висвітлено питання конкурентоспроможності країни в ув'язці з експортним потенціалом. Проведено аналіз та оцінено розвиток сільського господарства і стану якості його інфраструктури. Визначено та проаналізовано позиції за всіма показниками країни в рейтингу Індексу глобальної конкурентоспроможності Всесвітнього економічного форуму.

Ключові слова: фактори конкурентоспроможності; сільськогосподарський експорт; інфраструктура; Всесвітній економічний форум; Індекс глобальної конкурентоспроможності.

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ИССЛЕДОВАНИЕ КЛЮЧЕВЫХ ФАКТОРОВ КОНКУРЕНТОСПОСОБНОСТИ ЭКОНОМИКИ И СЕЛЬСКОХОЗЯЙСТВЕННОГО ЭКСПОРТА КАЗАХСТАНА

В статье рассмотрены вопросы конкурентоспособности страны в увязке с экспортным потенциалом. Проведен анализ и оценено развитие сельского хозяйства и состояния качества его инфраструктуры. Определены и проанализированы позиции по всем показателям страны в рейтинге Индекса глобальной конкурентоспособности Всемирного экономического форума.

Ключевые слова: факторы конкурентоспособности; сельскохозяйственный экспорт; инфраструктура; Всемирный экономический форум; Индекс глобальной конкурентоспособности.

Problem statement. Kazakhstan's strategic goal is establishing sustainable and progressive export, particularly by those goods, the production of which is traditional. This task will be challenging for the decades to come. In international economic sources Kazakhstan is often mentioned as oil exporter, as a country possessing significant reserves of mineral resources as well as oil. The value of this article is that it discusses the renewable types of resources and agricultural production in particular.

Today the country's main regulatory document is the Strategy "Kazakhstan-2050" (14.12.2012). It focuses on the necessity for further modernisation of the agricultural sector, taking into account the global urgency on the demand for agricultur-

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al produce. Within the key strategic goal the agroindustrial industry of the country has been imposed to accomplish the following objectives: to become one of leading exporters at the international market of agricultural produce; to increase its production; to increase cultivated lands; to achieve high yield indices, and by means of innovative technologies to create competitive domestic brands focused on ecological properties of goods.

Latest research and publications analysis. K. Ahmetova (2012), F.M. Dnishev (2014), G. Kaliev (2013) and other authors have studied the issues related to economy competitiveness as a whole, including agricultural export. At the same time, certain aspects of competition, competitiveness and business mechanism of its increase in relation to national agricultural produce remain insufficiently researched.

Unresolved issues. Today Kazakhstan has become a member of the Customs Union and is moving towards membership in the World Trade Organisation (WTO). There is a range of factors adversely affecting the country's competitiveness, such as the low level of development of innovative technologies and low productivity rate in agriculture. The country's membership in WTO could lead to the significant increase in the level of imports over exports and the decrease of domestic enterprises competitiveness.

The research objective is to demonstrate the influence of a combination of factors on the competitiveness of Kazakhstan's exports. To accomplish the above task the authors have used information from various reports, papers, statistical data, and also expert opinion at defining the competitiveness index.

Key research findings. Kazakhstan is among the countries with a relatively high level of development efficiency. All countries in the World Economic Forum (WEF) rating, based on the data studied, are classified to a certain stage of economic development. The key factor in this ranking is the indicator of the GDP level per capita. For the countries with high dependence on mining and exporting of mineral resources for the development of the economy, such as Kazakhstan, additional criteria while measuring the dependence degree of country's development are applied. In this case the key factor is the share of crude materials in total exports (goods and services) for the last 5 years. Countries, where the share of crude resources export in total exports comprises 70% and more, belong to the 1st category of development (the stage of factor development) (Kazakhstan in the Index of global competitiveness of WEF, 2013). Kazakhstan has recently been in this development category.

In the framework of the research the analysis of all the indicators of the Index of Global Competitiveness (IGC) for the last 7 years (2008–2014) was conducted to demonstrate the dynamics of the development of Kazakhstan's positions and the potential capacity of its competitiveness. Based on the data of the abovementioned report, competitive advantages and deterrent factors of the country's development are presented. The authors have defined that according to the IGC results for the 2014–2015 period, Kazakhstan could be referred to the position of transition from Stage 2 (efficient development) to Stage 3 (innovative development). The research conducted implies that, as a whole, Kazakhstan's positions in the IGC for the last 7 years have improved (+22 positions). The country's leap forward in the rating has resulted from the improvement of positions in the following factors: "infrastructure", "efficiency of commodities market", "institutions" and "technological availability" (Table 1).

Table 1. Position of Kazakhstan in the WEF ratings, 2008–2014

Groups and rating factors	2008–2009	2009–2010	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015	Dynamics
Index of global competitiveness	72	72	72	72	51	50	50	+22
I group: general requirements	69	62	62	62	47	58	51	+18
Institutions	91	94	91	94	66	55	57	+34
Infrastructure	81	82	81	82	67	62	62	+19
Macroeconomic environment	25	18	26	18	16	23	27	-2
Public healthcare and primary education	85	85	85	85	92	97	96	-11
II group: efficiency factors	71	76	76	76	56	53	48	+23
Higher education and professional training	65	65	65	65	58	54	62	+3
Efficiency of goods market	86	87	86	87	71	56	54	+32
Efficiency of labour market	21	21	21	21	19	15	15	+6
Maturity of financial market	117	121	117	121	115	103	98	+19
Technological availability	82	87	82	87	55	57	61	+21
Market size	55	55	55	55	55	54	52	+3
III group: Factors of innovations and complexity	102	104	104	114	104	87	89	+13
Competitiveness of companies	102	109	102	109	99	94	91	+11
Innovation potential	101	116	101	116	103	84	85	+16

Constructed by the author based on (www.weforum.org).

The data in Table 1 speaks for itself. Among positive changes in comparison with the previous condition (thus, the advantages of the current situation could be obtained) the author points out positive developments in the efficiency of labour market. This factor is one of the most important while considering the competitive advantages of any country, Kazakhstan is no exception. Based on this indicator, Kazakhstan gained the 15th rank, thus, improving its position by 4 points on account of the increase of economic activity and population employment rate. During the last 13 years (2001–2013) the number of employed has increased from 6698.8 ths people to 8507.2 ths people, while the unemployment rate has decreased from 12.8% in 2001 to 5% in 2014 (3rd quarter) (economy.gov.kz). Considering the actual value of the indicators of components included into the global competitiveness rating, the authors would like to underline the meaning of this rating in the context of export competitiveness specifically. The bottomline is the following: the higher the level of social and economic indicators is, the better the dynamics of the living standards increase in the country will be, so it is easier for the country to solve the task of increasing the allocation for export (i.e. grain) from the received production volume and carry-over.

The most progress Kazakhstan has demonstrated in the rating by the criteria "*Technological availability*", where it has strengthened its position (+21 positions up) in 2014 in comparison to the 82nd place in 2009. That was also influenced by the introduction and implementation of the Programme for innovations development and assistance to technological modernisation in the Republic of Kazakhstan for

2010–2014 (State Programme for boosting industrial and innovation development of RK, 2010).

In the component "*Institutions*" Kazakhstan takes 57th place out of 148, ahead of Russian Federation, Brazil, some Eastern European and CIS countries. Improvement in the quality of institutional environment, namely strengthening the protection of property rights, fight against corruption, increase of public governance efficiency and improvement of corporate management standards are the key priorities for the country's government.

In the WEF report by the indicator "*Market size*" Kazakhstan currently takes the 52nd place, and in the 5 previous years (until 2013) it took the 55th position.

In the component "*Macroeconomic environment*" the country's position dropped by 2 positions, from the 25th to 27th place in 2014. But this indicator is sufficiently good from the point of view of the competitiveness of the country's economy taking into account low debt and high internal savings norm.

In the component "*Company competitiveness*" the country takes the 91st place, thus improving its ranking by 11 positions. Relatively low results in this area of competitiveness are partially explained by the limited amount and insufficient development of industrial clusters.

The country has significantly improved its position in the component "*Efficiency of goods market*" by taking the 54th place (an increase by 32 positions). Currently in each region and single-industry city the work on the creation of business-incubators activity is being carried out, aimed at providing practical help to entrepreneurs and covering the development of business plans, consulting, microcrediting, providing other services.

Innovations is a very important development component for Kazakhstan, in the WEF rating of the component "*Innovation potential*" the country has improved its place by 16 positions and takes the 85th place. The volume of innovation produce has increased significantly, by 60.6% and comprised 379 bln KZT in 2014 (Dnishev, 2014). In 2012 the Law of RK "On the state support of industrial innovation activity" was introduced. This new law has improved the terminology in the field of innovations in accordance with international practice.

It is noteworthy that the main reason for the rating increase of Kazakhstan in the Index of Global Competitiveness in 2013–2014 was the improvement of the quality of "*Infrastructure*". Thus, the country has risen by 20 positions (from the 82nd to 62nd) in comparison with 2008–2009.

Membership in the Customs Union could also bring new opportunities to improve the condition of the country's economy as a whole and in the agroindustrial sector in particular. Within the Customs Union there is an opportunity to import to the territory of RK agricultural equipment and its components at the prices of manufacturing. Also, customs duty on the import of agricultural machinery to members countries is not applied. Instead, a common customs tariff and other unified measures of trade regulation are in force. This allows replenishing and improving the technical stock for agricultural production.

The availability of the main types of agricultural machinery in Kazakhstan (units) is demonstrated by the following data (Table 2).

Table 2. Availability of the main types of agricultural machines in RK

Equipment type	2007	2008	2009	2010	2011	2012	2013
Tractors	132676	134799	137213	156037	156656	155580	156200
Combine harvesters	44339	44621	45454	48032	49503	46997	45000
Seeding machines	87625	90362	90743	91599	90960	77187	77428
Sowing machines	771	1126	1520	1995	2408	2651	2861
Cutters	15458	15575	15243	15439	15200	15233	15550

Source: On the performance results of the Ministry of Agriculture RK, 2014.

Agricultural producers in the last 5 years (2009–2013) have been buying more high-producing equipment from leading world manufacturers. As a result, the energy supply of agricultural production in the country has increased in comparison with 2002 by 19.5% and comprises 165 horsepower or 123 kW per 100 ha of arable land. For comparison, in Russia the energy supply of agricultural production is 259kW, Germany, the Netherlands and Italy – 350 kW, France – 364 kW, Great Britain – 404 kW, and in the USA – 405 kW. At that, for example, highly productive sowing machines "Khorsh", "John-Dir", "Case", "Morris" comprise around 4.9% of the total number and seed 35.2% of planting acreage.

The outlined facts demonstrate the growth of Kazakhstan's indicators in the rating positions of the WEF. The negative side here is the significant depreciation of basic assets, due to long-term underfunding in industries, rail transport and agriculture. Thus, the average age of over 80% of combine harvesters and tractors is 13–14 years, while the rated life usage is 8–10 years. Under disposal are 71% of combine harvesters, 93% of tractors, and 95% of seeding machines. In general, the existing stock of agricultural machinery has the deterioration rate of approximately 80% (The Law on Transport Strategy of RK, 2006).

Table 3. Position of Kazakhstan by the quality of infrastructure in the rating of the WEF, 2008–2015

Indicators	2008–2009	2009–2010	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015	Dynamics
Infrastructure	81	82	81	82	67	62	62	+19
Quality of infrastructure, overall	71	69	74	85	78	64	62	+9
Quality of roads	108	116	124	125	117	117	113	-5
Quality of railway infrastructure	34	32	32	33	29	27	28	+6
Quality of port infrastructure	101	110	111	104	115	135	123	-22
Quality of infrastructure for air transport	102	94	95	103	95	89	85	+17
Capacity of passenger transportation, p/km	62	64	67	62	61	59	57	+5
Quality of electric power supply	81	77	84	91	81	78	78	+3
Number of mobile subscribers per 100 people			54	38	20	10	4	+50
Number of landline subscribers per 100 people	64	60	66	46	47	45	43	+21

Constructed by the author based on (www.weforum.org).

There is a decline in the country in the *quality of roads* by 5 positions (113th rank). The network of motorways got one of the worst positions in the rating. Unsatisfactory condition of the road surface leads to the decrease of cruising speeds, increased transport maintenance costs, and the increase in the amount of cars breaking down on the roads. As of 2014 more than 20% of the roads with national status and more than 40% of the roads with local status were in an unsatisfactory condition (Zhumataeva et al., 2014). In Kazakhstan the implementation of the construction project the motorway "Western Europe – Western China" gives hopes for improving the quality of its motorways.

The main railway lines have noticeably improved the country's position in terms of the indicator *"the quality of railway infrastructure"*, thus strengthening the position by 6 positions in 2014 as compared to 34th place in 2009. To a great degree this was caused by the construction of new main lines.

As it has been noted, in recent years there has been a significant depreciation of basic assets, in particular, in haulage. This could be explained by long-term underfunding in the railway industry, namely at JSC NC "Kazakhstan Temir Zholy" (Kaliev, 2013). This has been caused by insufficient investments in this industry, the use of an outmoded stock of railway equipment and maintenance vehicles, as well as outdated repairs and maintenance technology of basic production assets.

By marking complexities notable in the country and basing on the assessment of the analysed range of indicators, the author have also defined that Kazakhstan is among the countries not best rated by *"the quality of infrastructure of air transport"*, although there is a positive increase in this index (promotion by 17 positions to the 85th place). To a great extent the development of air transport is being adversely affected by insufficient modernisation of infrastructure and basic assets in civil aviation. Due to insufficient carrying capacity and non-compliance with technical standards, air hubs of Kazakhstan have been forced to decrease the number of their inbound and outbound flights. 70 international air-corridors pass over the territory of Kazakhstan. In the face of all positive and negative issues present in the transport system of Kazakhstan, nevertheless, there is a growth in *passenger transportation*, in mln passengers/km (going up by 5 positions to the 57th place). This fact could also be treated as a positive trend in the country's development.

Moving to other rating indicators we note that Kazakhstan is among the countries with a worse position by the quality of *port infrastructure*. There is a significant decline here (by "-22" positions to the 123rd place).

Currently Kazakhstan has only got one commercial seepport, Aktau, located on an inland sea and has no access to the open sea. This significantly limits the export potential of the country. Port Aktau is a component of three international corridors: "TRACECA", "North-South", and "Inogate". The total volume of cargo transported in the Caspian region by water is approximately 30 mln tons (Ahmetova, 2012). At that, the share of port Aktau comprises around 38% of the total volume.

The largest share of Kazakhstan's export of agricultural produce is made up of plant products, the share of which in the country's total export from 1995 has fluctuated from 9.6% to 4%. The export volume has been mainly formed on the account of grain, which represents more than 70% in the agricultural export. Kazakhstan possesses a significant capacity for grain and flour export. Today the country is among the

7 largest grain exporters in the world. The flour export to international markets comprises 11.5 mln tons/year, and Kazakhstan takes up to 19% of this market (Razakova, 2013). Annually Kazakhstan on average exports 6–8 mln tons of wheat, and around 2 mln tons of flour. In the nearest future the main directions in the export of Kazakhstan’s grain and flour will widen through the port of Aktau and other ways to the countries of the CIS, the European Union, North Africa and South-East Asia.

To improve positions in the WEF rating it is necessary to improve the port’s production infrastructure. It is already in mid-term plans to rise it to the level of international standards.

Further the authors consider the comparison of infrastructure of the countries with different level of competitiveness (Figure 1).

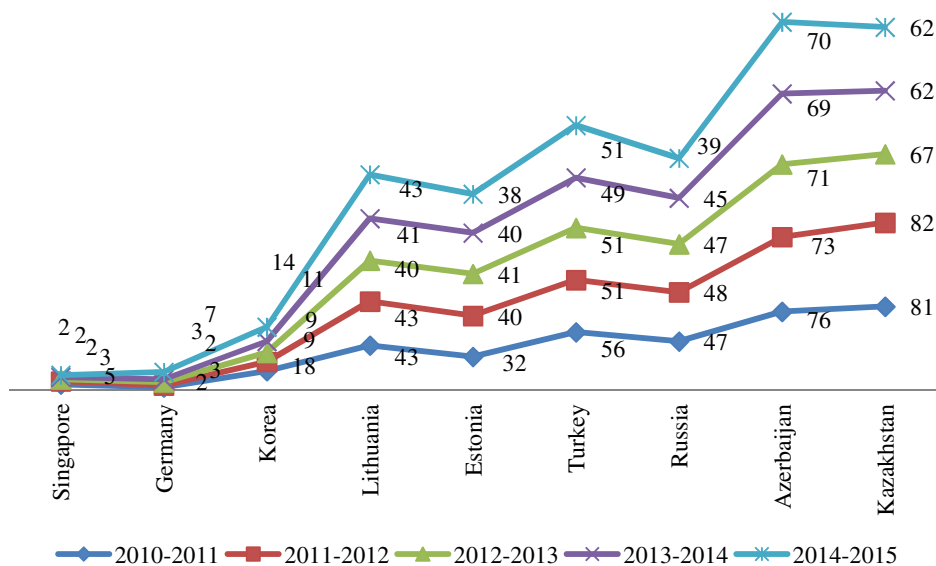


Figure 1. Comparative assessment of infrastructure development for Kazakhstan and the selected countries, constructed by the authors the WEF Data

The data shown in Figure 1 demonstrate a significant gap between Kazakhstan and other countries by the quality of infrastructure. This is caused by the low quality of roads, port infrastructure and air transport infrastructure.

Underdevelopment of transport infrastructure results in Kazakhstan’s relatively high share of transport expenses in the cost of end product (8% for internal railway and 11% for internal motor transportation). For countries with more developed economic systems and infrastructure this indicator is usually about 4–4.5% (Klimenko, 2012).

Conclusions. Under general assessment of the competitiveness index of the WEF as of 2014, Kazakhstan occupies a breakthrough 50th place among 144 countries of the world. By this indicator Kazakhstan is behind the majority of the countries in our comparison and is ahead of only the neighbouring Russian Federation. At the same time, in the last 6 years the country demonstrates the biggest among these countries

growth of index value, which confirms the gradual increase of its competitiveness level.

Regardless the range of the executed works on the improvement of infrastructure quality of the agricultural sector of Kazakhstan, this area weakens the national competitiveness. Further research on the constraining factors for transport capacities in the country is required. Among them are political, institutional, infrastructural, human, and transport factors.

To sum up the data of the WEF report, the authors conclude that the introduction and implementation of social and economic programmes by Kazakhstan government has a strong and positive influence on the country's competitiveness. Implemented in 2014 tenge devaluation, the current decline in oil prices at the world market and other threats will be smoothed by the ongoing industrialisation and the chosen course to innovate the economy. The important factor is the existence of a significant fund of national welfare, and the growth of gold and forex reserves. Kazakhstan has very good opportunities for increasing the national product, including agricultural produce and export growth.

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