JOURNAL OF SECURITY AND SUSTAINABILITY ISSUES
ISSN 2029-7017 print/ISSN 2029-7025 online
2020 September Volume 10 Number 1
http://doi.org/10.9770/jesi.2020.10.1(26)

TOWARDS FOOD SECURITY: PECULARITIES OF THE GRAIN MARKET FUCTIONING[1]

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Received 15 February 2020; accepted 10 August 2020; published 30 December 2020

Abstract. The special role of grain in the composition of commercial products of the agro-industrial complex is determined by its strategic importance as a main food product and a very important, and for certain branches of animal husbandry, a crucial component of feed. On the other hand, Kazakhstan has become a major grain producer due to its natural and other features. In the conditions of economic transformation, the preservation of grain production and ensuring the rational use of its development potential is largely determined by the state of market functioning. In the formation and development of the grain market, inter-industry economic relations are of paramount importance. The new situation of Kazakhstan's participation in the world grain market, which requires scientific generalization, is connected with the formation of sovereign States and the transformation of trade between them from interregional to interstate.

Keywords: grain; grain products; sales; communications; sales; indicators; factors; conditions; sales; seeds; feed; system; source; means; resources

Reference to this paper should be made as follows: Tireuov, K., Mizanbekova, S., Kalykova, B. 2020. Towards food security: pecularities of the grain market fuctioning. *Journal of Securityand Sustainability Issues*, 10(1), 359-368. http://doi.org/10.9770/jesi.2020.10.1(26)

JEL Codes: Q13, Q17

1. Introduction

Food security together with energy security and water security are the main facets of sustainable development (Tireuov et al., 2018; Ivanova, Latyshov, 2018; Monni et al., 2018; Moumen et al., 2019; Mazzoni, 2020; Klimas, 2020; Panjaitan et al., 2020; Khan et al., 2020; Glotko et al., 2020; Zakharchenko et al., 2020).

The level of grain production in the Republic has always been one of the main characteristics of the country's economic independence and well-being. On the one hand, this valuable product is of a strategic nature, which determines the serious state interest in grain production, on the other hand, it is the basis for the development of the entire agro-industrial complex. Grain production in the country is the largest branch of agriculture. More than 70% of the total area of agricultural crops is occupied under the grain wedge, and in terms of the volume of resources involved in production of all types - labor, material, financial - this industry exceeds any branch of crop production (Ushachev, 2018; Ushachev et al., 2018; Stanciu et al., 2019).

1 The research is supported by a project "Inter-sectoral economic interaction of enterprises (organizations) of the grain products sub-complex in the conditions of the contemporary agro-industrial policy" financed by Ministry of Education and Science of The Republic of Kazakhstan

2. Methods of research

A distinctive feature of grain farming is that its basis - grain production is highly dependent on weather and climate conditions and is under the direct influence of this poorly controlled factor, which determines the different efficiency of producers in the sale of their goods in conditions of perfect competition and when purchasing the necessary means of production and receiving services in a monopolized market. The main grain producer in Kazakhstan is the Northern region: Akmola, Kostanay and North Kazakhstan regions, which account for about 66 % of the gross harvest in the country. Grain is also produced in other regions: Almaty (about 6% of the total gross harvest), Aktobe, Karaganda, Zhambyl and East Kazakhstan (3% each).

The main feature of the formation of the grain market consists in the specifics and purpose of the goods passing through it, namely grain and grain products, in their high share in the national structure of food consumption. Cereals, unlike other perishable products, are a multi-purpose and strategic product, the availability of which largely determines the political and economic stability in society.

Each type of grain is characterized by relative uniformity, divisibility, interchangeability, quality indicators of grain are subject to certain standardization, which gives it a large market as a commodity product.

3. The discussion of the results

Along with the social significance of grain as a valuable, irreplaceable and everyday food for the population, as well as the basis for the production of livestock products, the financial aspect is also important. Grain is one of the most reliable sources of income for commodity producers, giving them relative independence in the reproduction process (Espolov et al. 2020). The Strategic importance of grain in the country's food supply is also determined by the significant export reserves of grain, which can become a significant source of foreign exchange revenues to the country's budget (Altukhov, 2019). Bread and bread products, as a vital and irreplaceable product, have a guaranteed demand from the population. They meet about a third of the daily food needs of the population, up to 50% of the daily protein needs, from 30 to 50% of the necessary energy, up to 50-60% of b vitamins and up to 80% of vitamin E. At the same time, grain protein, which has high nutritional qualities, is significantly cheaper than animal protein, which to a certain extent makes it possible to combine the problems of quantity and quality of products into one whole (table 1).

Table 1. Production of the main types of agricultural products thousand tons

Production	1990 year	2001 year	2018 year	2018 in % to:	
				1990 г.	2001 г.
Seed	28 487,7	15 896,9	20 276,8	71,2	127,6
Vegetables and melons	143,8	2 301,2	4 681,9		177,4
Potato	2 324,3	2 184,8	3 807,0	163,8	174,3
Fruits and berries	301,1	171,2	300,4	99,8	175,5
Milk	5 641,6	3 922,9	5 686,2	100,8	144,9
Meat	1 559,6	654,5	10 59,4	67,9	161,9
Egg, million psc.	4 185,1	1 855,3	5 591,4	133,6	301,4

The discrepancy between the level of production and consumption of grain per capita on the territory of the country, as well as the local nature of the production of certain types of grain, make it necessary to transport grain from one region to another. The most important feature of grain that distinguishes it from other agricultural products is its high transportability and suitability for long-term storage, which allows for rapid long-distance inter-regional transfers of grain (Mizanbekova et al., 2019).

Instability and seasonality of grain supply volumes with stable and relatively uniform demand for bread products make it necessary to create its stabilization funds and strategic reserves. Their presence is important from various points of view: national security, the reliable supply of population with bread grain and livestock industries, the formation to a certain extent, prices of other food products, ensuring the balance and stability of market relations, regulation of prices on the grain market. The functioning of the grain market, as well as the market of many other agricultural products, is characterized by a number of features caused by the following reasons: its object is products of the first vital necessity, the demand for which is low-elastic in price and its production can not be determined solely based on economic feasibility; being related to the biological processes of growing plants, the volume of product supply for years largely depends on natural and climatic conditions; some types of means of production (seeds, feed) are reproduced in the farm itself and do not take a commodity form: after the harvest is complete, the products require special systems for working, storing, trading and corresponding infrastructure facilities, which are usually owned by different owners. These factors dictate the need for state regulation of production and sales processes, as well as the introduction of a system of crop and trade transactions insurance in order to guarantee financial feasibility required of all processes' implementation (Tvaronavičienė, 2018; Caplinska, Tvaronavičienė, 2020).

When determining the principles of formation and functioning of the regional grain market, a methodological approach is followed, according to which this market is considered as a multi-complex system of market relations, through which the production structure is spontaneously adapted to the volume and structure of social needs, the distribution of factors of production between different industries, etc. The regional market can be represented as a set of markets of various types, linked by a single goal - to ensure the normal functioning of the reproductive process in the region (Charykova, Latynin, 2015; Caurkubule et al., 2020).

Thus, the considered regional grain market of the Republic is a geographically separate, complex economic system, including a set of commodity relations and relations between its subjects, which are rural commodity producers, enterprises and organizations for storing, working and drying grain, its processing, as well as infrastructure facilities that provide accelerated turnover of material, financial and information flows in the market. The presence of a large number of subjects on the grain market makes it difficult to organize mutually beneficial economic relations, conduct advertising campaigns, and regulate prices and tariffs for services. The regional market formed within the administrative borders of three Northern regions (Akmola, Kostanay and North Kazakhstan) is one of the largest components of the country's overall food system. Occupying only 15.7% of the total population of the country, this region produces 63.4% of grain, 29.9% of potatoes, 11.5% of vegetables, 31.3% of meat, 33.7% of milk and 30.5% of eggs, providing for the main types of products not only domestic, but also the main part of interregional and export needs. Food consumption in Kazakhstan, kg per capita is presented below in Figure 2.

Table 2. Food consumption in Kazakhstan, kg per capita

Products	2001 year	2018 year	Science-based standards*	Consumption in % to the standard	
				2001 year	2018 year
Bread and bakery products	120	138,5	109	90,8	127,1
Potato	66	48,6	100	66	48,6
Vegetables and melons	95	94,1	149	63,7	63,2
Fruits and berries	10	74,9	132	7,6	56,7
Vegetable oil	11	19,2	13	84,6	150,0
Sugar	26	46,3	36	72,2	128,6
Meat and meat products	44	77,9	78,4	56,7	99,4
Milk and dairy products	235	261,2	301	78,1	86,8
Egg	109	193,3	265	41,1	72,9

ISSN 2029-7017 print/ISSN 2029-7025 online

As part of the grain regional market participate as the main subjects, on the one hand, sellers (supply of grain), on the other hand - buyers (effective demand) (Mizanbekova et al. 2019).

In accordance with the organizational structure of the grain market participants are:

grain producers (agricultural enterprises of all forms of ownership and management);

primary buyers of grain (grain Resellers, small and medium-sized intermediaries);

large wholesale buyers of grain (trade and purchasing, supply and marketing firms and cooperatives, grain companies, elevators and HPP, stock exchanges, brokerage offices, wholesale markets, trading houses, etc.);

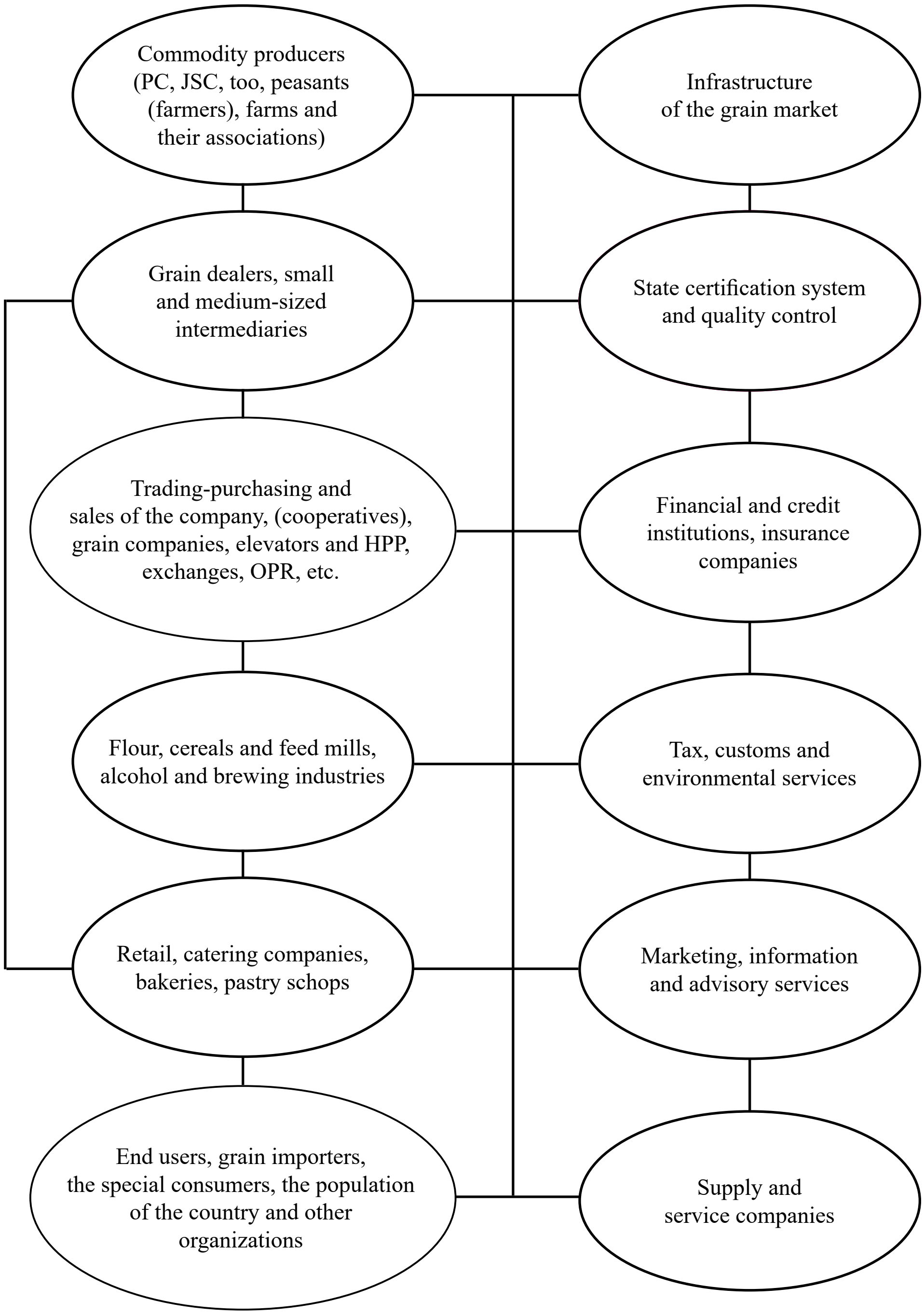
flour-grain and feed enterprises, alcohol and brewing industry;

bakery enterprises, macaroni and confectionery factories, trade and catering enterprises;

end customers: grain importers, special consumers, the country's population, and other organizations (scheme 1)

The purchase and sale process is serviced by a market infrastructure designed to ensure the free movement of grain, the safety and rational use of products. The regional market also includes wholesale city and district markets, fairs, auctions, and retail businesses. When making transactions, buyers and sellers are practically not connected to each other by long-term contacts and contracts, so that commercial transactions concerning the purchase and sale of grain are most subject to the actions of the market relations mechanism. Regional markets, while having common patterns, at the same time have their own characteristics due to the state of the economic situation in the region, the system of management, its place in the system of interregional and interstate economic relations (scheme 1).

Currently, market laws force each region to independently form food funds, based on the resources of products produced on its territory, to search for markets for excess products or sources of purchase of missing volumes in the domestic and foreign markets. The supply of grain, as well as the demand for it, is not constant and is determined by the volume of grain that is sold within the region, by the import of grain from other regions and countries. Effective demand for grain is determined by the size of the region's population, traditions of consumption of grain and its processed products, the level of income and the part of it that is allocated by the population for the purchase of food (Mizanbekova et al., 2020). The source of an increase or decrease in the supply of grain, as is known, is the change in the size of sown areas, crop yields under the influence of weather conditions, effective technical and technological means used in agricultural production, and other objective and subjective factors.



Scheme 1. System of regional grain market entities

When assessing the regional market, the level of self-sufficiency of the region with grain, its existing intra-regional, interregional and interstate relations are important.

The grain market like any commodity market can be considered from the perspective of the species, sectoral, technological, territorial and other closely interrelated and interacting structures: structure is associated with different consumer properties of grain and products of its processing, industry with areas of use, process - step-wise movement of products from the production of raw materials to manufacturing finished products.

The territorial structure of the grain market divides the markets into national (local, regional and interregional), interstate (market of the countries of the far and near abroad) and global (Semin, 2019).

ISSN 2029-7017 print/ISSN 2029-7025 online

The industry structure of the market of a particular type of grain is determined by the directions of its use. For example, wheat grains can be used for bread making (soft food wheat market), pasta production (durum wheat market), and livestock feed (feed wheat market). Barley grain can be used for beer production (malting barley market), for livestock feed (feed barley market), etc.

The food grain market in the region is the most capacious and dynamic. The main share in the structure of its forming resources is occupied by wheat (99.8%), the rest is accounted for by rye (0.07%), buckwheat (0.05%), millet and barley (0.04 each), as well as in small proportions the food part of legumes and oats.

Bread products include bread and pasta (in terms of flour), flour, cereals and legumes. If the need for food grain resources in their total amount is provided in General in accordance with the effective demand of the population, then there is a shortage for certain types of grain. So, at present, the need for flour production in the grain of hard, strong and valuable wheat is met by only 55%, and the production of rye provides the population's need for rye flour by only 22.7%.

The total production volume for soft wheat according to the Grain Union was 10.4 million tons. As a result, the total supply on the market was formed at the level of 12.3 million tons, with passing balances at the beginning of the season in the amount of 400 thousand tons and total imports of 1.5 million tons.

In the structure of feed grain resources used, the main share (95 %) is accounted for barley, oats, and ordinary wheat, while the share of corn is only 3.5%, and legumes 0.8%. The amount of feed grain allocated per available livestock provides only 25-30% of the animal husbandry's demand for concentrated feed. Moreover, the structure of grain-feed raw materials used for feed is not rational and does not correspond to scientifically based standards and the structure of animal feeding (Sidorenko, 2015).

In particular, the needs of animal husbandry in corn and legumes are not fully met, the lack of grain of these crops is made up by the use of valuable food wheat, which is significantly inferior to the main forage crops in terms of feed values.

The efficiency of using grain raw materials increases when feeding animals full-fledged compound feeds, balanced in protein and energy content.

Currently, the total demand of livestock and poultry industries for compound feed is about 5 million tons per year. The capacity of feed mills available in the country allows providing farm animals with compound feed for 48% of the total demand. At the same time, in 2018, the actual supply of domestic feed was 20%.

By 2021, it is planned to increase the volume of feed production in the country from 1 to 2.5 million tons per year.

For the development of feed industry in the framework of the State program of agribusiness for the years 2017-2021 the following measures of state support: the cheaper cost of feed produced by feed mills and sold to agricultural cooperatives engaged in livestock production; depreciation to 50% of the cost to feed farm animals.

In order to increase the volume of feed production and export of popular products, as part of the ongoing work to diversify the structure of sown areas, it is planned to expand the area for barley, oats, corn for grain.

In addition, the feed mill provides state support measures by subsidizing part of the investment for the purchase of specialized machinery and equipment.

Almost three-quarters of all feed production is concentrated in four regions: Almaty, Akmola, Kostanay and

North Kazakhstan. Production in Almaty region is more than 29% of the total share of production throughout the country, in Akmola - 14.9%, in Kostanay-14.5%, and in North Kazakhstan-12%. In the Almaty region, the production of extruded compound feeds for fish grown by industrial and pond methods, using domestic raw materials, has been established.

According to the available balance sheets, about 6.6% of grain resources subject to distribution are concentrated in the seed grain market. The volume and type structure of grain crops used for seed purposes depends on the size and structure of the acreage, which has undergone major changes in recent years, both in terms of structure and size.

The peculiarity of the seed market in the region is the recent deterioration in the quality and varietal composition of seeds, which, it would seem, would cause inflated seed rates per hectare of sowing. At the same time, due to lack of financial resources for commodity producers, its actual seeding per 1 ha is now 15-20% below the norm, which further aggravates the situation of the grain industry.

The market of grain used for technical processing covers the industries that produce non-alcoholic products - brewing, alcohol industry, as well as enterprises that produce starch, oil, glucose-fructose syrup (sugar substitutes), kvass, “live” gluten, and other medical products from grain. Special importance in the resources of grain used for this purpose belongs to wheat, mainly ordinary, barley, corn and rye.

The system of specialization and placement of agro-industrial production branches that served in the recent past and the established interregional food relations took into account, first of all, national interests (Tireuov, 2016, Tireuov et al., 2020). However, instead of a balanced correction of past shortcomings in production and sales, there is a violation of previously worked-out proportions, accompanied by a break in traditional interregional ties, regional separatism in the field of food policy, and the destruction of the country’s single market space. First of all, this affected the turnover of grain and its processed products: fearing a shortage, local authorities in the regions resort to non-economic measures to regulate grain trade by introducing direct or indirect restrictions on the movement of grain outside the region.

The formation of a single economic space of the Republic is also hindered by the rise in the cost of energy resources and, accordingly, the increase in the cost of transporting both agricultural and final products of the grain subcomplex. This hinders, first of all, the development of commodity flows from zones with the most favorable production conditions to scarce areas, restricts the possibility of improving interregional and inter-industry relations, which ultimately leads to a decrease in the revenue part of local budgets, restraining the development of production due to the fall in the interest of commodity producers (Franchuk et al., 2020).

In this regard, the elimination of monopolies in the procurement, storage, domestic and foreign trade of grain and grain products, the abolition of local protectionism, the widespread use of regional specialization and interregional division of labor are one of the main conditions for the formation and development of a national and regional grain market.

In a market economy, all spheres of activity, including production, are permeated by a system of market relations, so the grain market must be considered not only as a sphere of exchange, but also as a type of management that includes the entire reproductive process - production, sale and consumption of grain.

Accordingly, state regulation of the grain market should be considered as an impact not only on the sphere of exchange, but also on the sphere of production and consumption of grain.

Although sales and consumption are the final stage of a commodity producer’s economic activity, sales planning procedures based on market research in market conditions precede production planning. The main goal of sales is the realization of the economic interest of the manufacturer on the basis of satisfying the effective demand of consumers. In order to survive in market conditions, domestic producers must strive to produce what is sold, rather than looking for buyers after the products are produced.

The lack of reliable and timely information and marketing causes difficulties in marketing food wheat. As a result, the volume of unclaimed grain reserves increases, which leads to irrational expenditures of labor, material and financial resources for organizing its storage, selling grain at low prices through random intermediaries. Therefore, among the main directions of state influence on the sales sphere is the system of orientation of commodity producers to the most likely demand, providing them with the possibility of producing the volume and type of grain for which sales are guaranteed (Umbetaliev et al., 2017).

An important direction for the development of interregional relations in the conditions of functioning of market relations should be to ensure the maximum favorable market conditions for all economic entities and create an economic environment for competition between them, the gradual transition of grain market entities to interregional integration on the basis of direct relations and contractual relations.

First of all, this is the legal and economic independence and independence of economic entities of the grain market, combined with their economic responsibility for the results of their production and commercial activities. Only in this case, carrying out their economic activities on the basis of economic benefit and their own initiative and enterprise, their behavior will contain motives that will ensure the effectiveness of the market mechanism of management and its main elements: price, demand, supply, competition.

In the conditions of liberalization of prices for grain and products of its processing, it is important to preserve the state's obligations to grain-producing farms to accept from them the entire volume of grain sold at guaranteed prices in the event of a collapse in the market price for it.

Since the regional market is the primary fundamental economic unit of the country's food market system, it must necessarily be regulated by the state on the basis of measures of influence at both the national and interregional and regional levels.

The system of market regulation at the regional level should be based primarily on economic methods and be implemented taking into account local conditions and characteristics, based on the availability of financial and material resources. At the same time, the relevant decisions of local legislative bodies should not violate the system and dynamism of management and contradict the national legislation. In this regard, the regional grain policy should be designed in such a way as to ensure that market agents can freely enter the domestic market and participate in the national as well as international market.

Adaptation of the structure of grain production to the specific and assortment needs for grain is most achieved by establishing direct links between its consumers. These relationships can take the form of long-term contracts for the supply of grain for state needs, long-term interstate and interregional agreements, the creation of integrated associations of vertical and horizontal types with different completion of the technological cycle, as well as the conclusion of direct contracts between rural commodity producers and grain processing enterprises and other economic entities of the grain market. The state should facilitate this process by creating the most favorable conditions for the sale of grain when it is sold to national or regional funds, encouraging the organization of integrated associations by providing them with preferential tax treatment or access to credit resources.

References

Altukhov, A. (2019). Paradigm of food security in Russia: monograph. M.: Fund „Personnel reserve", 682 p.

Altukhov, A. I. (2016). Improving the organizational and economic mechanism of sustainable development of agro-industrial production in Russia. Economy of Agricultural and Processing Enterprises, 7, 2-11.

Altukhov, A.I., Nechaev V.I. (2015). Economic problems of innovative development of grain subcomplex of Russia. M. Nasirddinova V.V. Publishing House, 477 p.

Caplinska, A., Tvaronavičienė, M. (2020). Creditworthiness place in credit theory and methods of its evaluation. Entrepreneurship and Sustainability Issues, 7(3), 2543- 2555. http://doi.org/10.9770/jesi.2020.7.3(72)

Caurkubule, Zh. L., Kenzhin, Zh. B. Bekniyazova, D.S., Bayandina, G.D., Dyussembekova, G. S. 2020. Assessment of competitiveness of regions of the Republic of Kazakhstan. Insights into Regional Development, 2(1), 469-479. http://doi.org/10.9770/IRD.2020.2.1(6)

Charykova, O.G., Latynin, D.S. (2015). Development of grain market infrastructure is an important condition for the implementation of Russia's export potential. Modern Economy: Problems and Solutions, 4(64), 138-144. https://doi.org/10.17308/meps.2015.4/1229

Espolov, T., Espolov, A., Tireuov, K., Zharylkassyn, Z., Keneyev, M., Suleimenov, Z. (2020). Supply chain logistics in agricultural sector-Assessing opportunities for competitiveness increase. International Journal of Supply Chain Management, 9(2), 745-752.

Franchuk, V., Melnyk, S., Panchenko, V., Zavora, T., Vakhlakova, V. (2020). Enterprise sustainability forecasting in the context of economic security management. Journal of Security and Sustainability Issues, 9(M), 336-346. https://doi.org/10.9770/jssi.2020..M(27)

Glotko, A. V., Okagbue, H. I., Utyuzh, A. S., Shichiyakh, R. A., Ponomarev, E. E., Kuznetsova, E. V. (2020). Structural changes in the agricultural microbusiness sector. Entrepreneurship and Sustainability Issues, 8(1), 398-412. http://doi.org/10.9770/jesi.2020.8.1(28)

Ivanova, S., Latyshov, A. (2018). Sustainable entrepreneurship: agrarian policy in South Korea, Entrepreneurship and Sustainability Issues, 5(4), 748-760 https://doi.org/10.9770/jesi.2018.5.4(4)

Khan, H., Shaheen, I., Ahmad, M., Bakhshaliev, E., Khan, H.U., Kabir, A. (2020). Energy infrastructure and foreign direct investment in China. Entrepreneurship and Sustainability Issues, 8(1), 233-248. http://doi.org/10.9770/jesi.2020.8.1(16)

Klimas, E. (2020). Sustainable development and urban planning regulations in the context of climate change management measures. Entrepreneurship and Sustainability Issues, 8(1), 24-37. http://doi.org/10.9770/jesi.2020.8.1(2)

Mazzoni, F. (2020). Circular economy and eco-innovation in Italian industrial clusters. Best practices from Prato textile cluster. Insights into Regional Development, 2(3), 661-676. https://doi.org/10.9770/IRD.2020.2.3(4)

Mizanbekova S., Kalykova, B.B., Nurmanbekova, G.K. (2019). The competitiveness of Kazakh grain on the domestic and foreign grain markets. Problems of Agricultural Market, 3, 112-118.

Mizanbekova, S.K., Bogomolova, I.P., Shatokhina, N.M. (2020). Prospects of digital and innovative technologies in managing the competitiveness of enterprises. Technique and Technology of Food Production, 50(2), 372-382.

Monni, S., Iorio, M., Realini, A. (2018). Water as freedom in the Brazilian Amazon. Entrepreneurship and Sustainability Issues 5(4), 812-826 http://doi.org/10.9770/jesi.2018.5.4(8)

Moumen, Z., El Idrissi, N.E.A., Tvaronavičienė, M., Lahrach, A. (2019). Water security and sustainable development. Insights into Regional Development, 1(4), 301-317. https://doi.org/10.9770/ird.2019.1.4(2)

Panjaitan, T. W. S., Dargusch, P., Wadley, D., Ammar, A. A. (2020). Toward the best practice emissions reduction in an emerging economy: An analysis of cement manufacturing in Indonesia. Entrepreneurship and Sustainability Issues, 8(1), 103-122. http://doi.org/10.9770/jesi.2020.8.1(7)

Semin, A.N. (2019). Priority directions of agroeconomic research of scientific and technological development of agroindustrial complex of Russia. Economics of Agricultural and Processing Enterprises, 1, 2-6.

Sidorenko, O.V. (2015) .Conceptual approach to the assessment of grain products subcomplex development in the open economy. Agricultural Russia, 1, 35 -38. https://doi.org/10.15217/48484

Stanciu, S., Virlanuta, F.O., Dinu, V., Zungun, D., Antohi, V.M. (2019). The Perception of the Social Economy by Agricultural Producers in the North-East Development Region of Romania. Transformations in Business & Economics, 18, (2B (47B)), 879-899.

Tireuov, K., Mizanbekova, S., Kalykova, B., Nurmanbekova, G. (2018). Towards food security and sustainable development through enhancing efficiency of grain industry, Enterpreneurship and Sustainability Issues 6(1), 446-455. http://doi.org/10.9770/jesi.2018.6.1(27)

Tireuov, K.M. (2016). Agribusiness in a globalized economy. Monograph. Almaty, 229 p.

Tireuov, K.M., Mizanbekova, S.K., Mizanbekov. I.T. (2020). Food security as an important factor of socio-economic development of the country agrarian economy. National Academy of Sciences of Belarus, 3, 63-72.

Tireuov, K.M., Mizanbekova, S.K., Nurmanbekova, G.K. (2020) Feed grain market in Kazakhstan. Problems of agricultural market, 1, 121-126.

Tvaronavičienė, M. (2018). Toward efficient policy making: forecasts of vulnerability to external global threats. Journal of Security and Sustainability Issues, 7(3), 591-600. https://doi.org/10.9770/jssi.2018.7.3

Umbetaliev, N.A., Abdildin, N.A., Mizanbekov, I.T. (2017). Improving the transport chain of grain production. Izvestiya NAS RK. Series of agrarian Sciences, 6. 260-266.

Ushachev I. G. (2018). Sustainable development and increasing the competitiveness of Russian agriculture in the context of deepening integration in the EEU: monograph by A. F. Serkov, V. V. Maslova, V. V. Chekalin et al.; ed. academician I. G. Ushacheva. M.: Scientific consultant, 320 p.

Ushachev, I.G., Maslova, V.V., Chekalin, V.S. (2018). State support of agriculture in Russia: problems, ways of their solution. Agro-Industrial Complex: Economy, Management, 3, 4-12.

Zakharchenko, O.V., Alieksieichuk, O.O., Kliuchnyk, A.V., Shyriaieva, N.Yu., Kudlai, I.V. (2020). State support of agricultural producers as a factor in increasing the competitiveness of the agricultural sector. Entrepreneurship and Sustainability Issues, 687-704. http://doi.org/10.9770/jesi.2020.8.1(47)

Acknowledgements

The research is supported by a project "Inter-sectoral economic interaction of enterprises (organizations) of the grain products sub-complex in the conditions of the contemporary agro-industrial policy" financed by Ministry of Education and Science of The Republic of Kazakhstan