CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE
FACULTY OF ECONOMICS AND MANAGEMENT

AGRARIAN PERSPECTIVES XXX.

SOURCES OF COMPETITIVENESS UNDER PANDEMIC AND ENVIRONMENTAL SHOCKS

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of the 30th International Scientific Conference

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PROCEEDINGS - of the 30th International Scientific Conference Agrarian Perspectives XXX. Sources of Competitiveness under Pandemic and Environmental Shocks

Publication is not a subject of language check.

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Czech University of Life Sciences Prague, Faculty of Economics and Management

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FOREWORD

The tradition of organizing annual international conferences is now a firmly established part of our long history. In connection with this tradition the jubilee 30th Agrarian Perspectives conference will take place at the Faculty of Economics and Management of the Czech University of Life Sciences Prague during the period of 15 to 16 September 2021. Unfortunately, the conference will not be held in its traditional format due to the current pandemic situation. But our experience gained from organizing other online conferences give us a strong hope that our conference will be interesting and successful.

The topic of this year's conference is Sources of Competitiveness under pandemic and Environmental Shocks. It has been almost two years that we have been facing a huge worldwide pandemic crisis. It has changed many aspects of our lives. We can see problems in areas of production, processing, packaging, delivery and more. But we can't stay knocked down. Every such situation must be taken as a challenge and an opportunity to discover new solutions and new ways to create a better future.

The wide scope of the conference provides space for authors in many research areas ranging from Economics, Management, and Rural development to Informatics and Systems Engineering. The conference generates not only a platform for discussing theoretical issues, but also for sharing experience and finding new partners for the future cooperation in the field of research.

We are looking forward to listening to the representative keynote speakers from the Czech Republic, the United Kingdom and Hungary, who will address the plenary meeting of the conference on 15 September 2021. Derek Shepherd - Academic Lead – Teaching and Quality in the Plymouth Business School, University of Plymouth, Lukáš Čechura – a professor at the Czech University of Life Sciences Prague, Matthew Gorton - a professor of Marketing at Newcastle University Business School and Deputy Director of the National Innovation Centre for Rural Enterprise and Imre Fertő - a director general at the Centre for Economics and Regional Studies in Budapest will provide a good starting point of the conference. They will also, undoubtedly, spark interesting debates and experience sharing which will continue in parallel sessions in the afternoon and the following day.

In conclusion, I would like to express my strong belief that the jubilee 30th Agrarian Perspectives Conference will create an inspirational framework for all participants and will contribute to the further development of our research areas.

Ing. Martin Pelikán, Ph.D.

Dean FEM CZU Prague

EXPORT RESTRICTIONS UNDER THE PANDEMIC SHOCK: IMPLICATIONS FOR THE COMPETITIVENESS OF WHEAT PRODUCTION IN RUSSIA

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Annotation: As a wheat exporter, Russia ranks first in the world. Almost half of domestic wheat production is exported due to its competitiveness characterized by the relatively high level of comparative advantage. According to the study in the context of export parity and significant export volumes, domestic wheat prices follow world market prices and largely depend on major importers' demand. Global wheat prices have been rising consistently over the past months caused by the recovery in Chinese economy, adverse weather conditions, disruptions in food value chains and liquidity injections in the USA and EU economies to mitigate the impacts of the COVID-19 pandemic. To restrain the rise in domestic prices, Russian government decided to introduced a floating export duty on wheat. This mechanism in the context of high world grain prices, economic stagnation, shrinking disposable incomes and increased risks of further devaluation of the national currency would lead to deterioration of the financial and economic situation, reduction of investment opportunities and technological lagging of Russian wheat producers behind their competitors in the world market. In this respect, Russian government efforts should be focused on increasing production and improving the competitiveness of wheat instead of restricting exports. A comprehensive set of measures regulating the wheat market also implies subsidizing wheat consumers, support for the development of transport and logistics infrastructure, and targeted assistance to vulnerable groups of the population. Such approaches would support grain consumers while respecting the interests of producers and exporters, thereby helping to achieve the national agri-food export target of USD 45 billion in the coming ten years.

Key words: Export restrictions, competitiveness, wheat market, export parity

JEL classification: Q17, Q18

1. Introduction

As Russia is the world's largest wheat exporter, its domestic market is sensitive to the world price fluctuations. To restrain the impact of rising global prices on the domestic cereals market, starting from June 2021 the Russian government decided to introduce a permanent damping mechanism in the form of a floating export duty on wheat, corn and barley (RBC, 2021). The duty on wheat was set at 70% of the difference between the base price calculated periodically on the basis of export contractual prices and USD 200. It is envisaged that the proceeds from the duty will be transferred to Russia's regions in the form of subsidies depending on the volume of their grain production.

It should be noted that a floating export duty on wheat had already been applied in Russia since July 2015, but it was zeroed out in September 2016. At that time, the calculation was based on the following formula: 50% of the customs value minus RUB 6,500, but no less than RUB 10 per ton (Table 1), i.e. RUB 6,500 of the price per ton was exempted from the customs duty.

In addition to the floating duty, the Russian government actively used other measures to limit grain exports (duties, quotas and export bans). Such measures were temporary and taken as a response to a poor harvest or a need to stabilize the domestic market in the face of increased demand for grain in the world.

Table 1. Russian government's measures restricting exports of grains

Effective period	Type of measure	Grains covered	Duty or quota size
January – May 2004	Export duty	Wheat and Rye	Euro 25 per ton
November 2007 – April 2008	Export duty	Wheat and barley	wheat - 10%, but no less than EUR 22 per ton, barley - 30%, but no less than EUR 70 per ton
May – June 2008	Export duty	Wheat and barley	wheat - 40%, but no less than EUR 105 per ton, barley - 30%, but no less than EUR 70 per ton
August 15, 2010 – June 31, 2011	Embargo	Wheat, barley, rye, corn, wheat or wheat-and-rye flour	
February – June 2015	Export duty	Wheat	15% plus EUR 7.5, but no less than EUR 35 per ton
July – September 2015	Export duty	Wheat	50% minus RUB 5,500 per ton, but no less than RUB 50 per ton
October 1 – September 22, 2016	Export duty	Wheat	50% of the customs value minus RUB 6,500, but no less than RUB 10 per ton
April – June 2020	Export quota for goods exported beyond the Eurasian Economic Union	Wheat, rye, barley and corn	7 million tons
February 15 – June 30 2021	Export quota for goods exported beyond the Eurasian Economic Union and export duties	Wheat, rye, barley and corn	17.5 million tons; Export duty rates within the quota: Wheat – EUR 25 per ton starting from February15 and EUR 50 per ton starting from March 1; Corn – EUR 25 per ton starting from March 15; Barley – EUR 10 per ton starting from March 15.

Source: resolutions of the Russian government on grain export regulations

A number of researchers noted that the use of ad hoc measures often has a negative impact on a country's participation in global value chains and on sectoral investments. For instance, according to Mitra and Josling (2009) all export restrictions lead to a deterioration of welfare in both the country imposing such measures and the rest of the world.

Assessing the consequences of wheat export restrictions during the global food crisis of 2007-2008, Götz et al. (2013) point out that the degree of integration of the Russian domestic market into the global wheat market decreased, causing prices to fall below their long-term equilibrium level and reducing private investment in the country's grain sector.

Russia's imposition of a ban on grain and flour exports after the 2010 drought in order to limit domestic price increases, preserve livestock and grain reserves for the domestic market has also been viewed as rather controversial. In this regard, Ksenofontov et al. (2019) note that the export ban causes direct losses to grain traders and producers and undermines Russia's reputation as a reliable supplier to the world market, which subsequently has to be restored by selling grain at a discount to competitors' prices.

Moreover, this ban brought very limited benefits to Russian consumers (Welton, 2011). Consumer prices for grain products continued to rise: from July to December 2010, flour prices increased by 18 percent and bread prices by 10 percent. The embargo had a negative impact on Russian wheat importers who were forced to switch to higher-priced supplies from other countries. Clearly, the beneficiaries of this measure were Russian livestock breeders who managed to keep their livestock. Nevertheless, Welton (2011) believes that in that situation a better solution (as opposed to the export ban) would have been to subsidize flour millers and bakers, provide targeted support to vulnerable groups, and support investments in the development of the grain complex, since a high-tech and productive grain sector helps strengthen the competitiveness of domestic livestock production in the long term.

In this respect, the objective of this study is to assess the basic factors determined current conditions for wheat market development and the impact of floating export duty on the competitiveness of wheat production in Russia, taking into account the implications for the main stakeholders of wheat value chain: producers, consumers and exporters. This will allow us to elaborate the recommendations on how to adjust the damping mechanism of wheat export regulation to balance the stakeholders' interests in the case of high world wheat prices.

2. Materials and Methods

The study is based on ITC, OECD, FAO, Federal State Statistics Service of Russia (Rosstat) and Bank of Russia data on Russia's wheat market. These data were analyzed using descriptive statistics and index approaches to estimate the major production and consumption patterns, quantitative and structural changes in the Russian wheat market, as well as export potential values of wheat. Factor analysis was applied to assess the influence of exchange rate and world price on Russia's domestic wheat price under current conditions.

Wheat export competitiveness was characterized by Balassa's Revealed Comparative Advantage (RCA) Index. This indicator is calculated as the ratio of exports of a particular product to the total export of all goods from the country in comparison with the similar ratio for the world as a whole (Balassa, 1977). If a country's revealed comparative advantage for a particular product exceeds 1 (RCA>1), it is considered to be a competitive producer and exporter of that product compared to the "average" country. The higher the value of RCA for a particular product, the higher the export opportunities for that product.

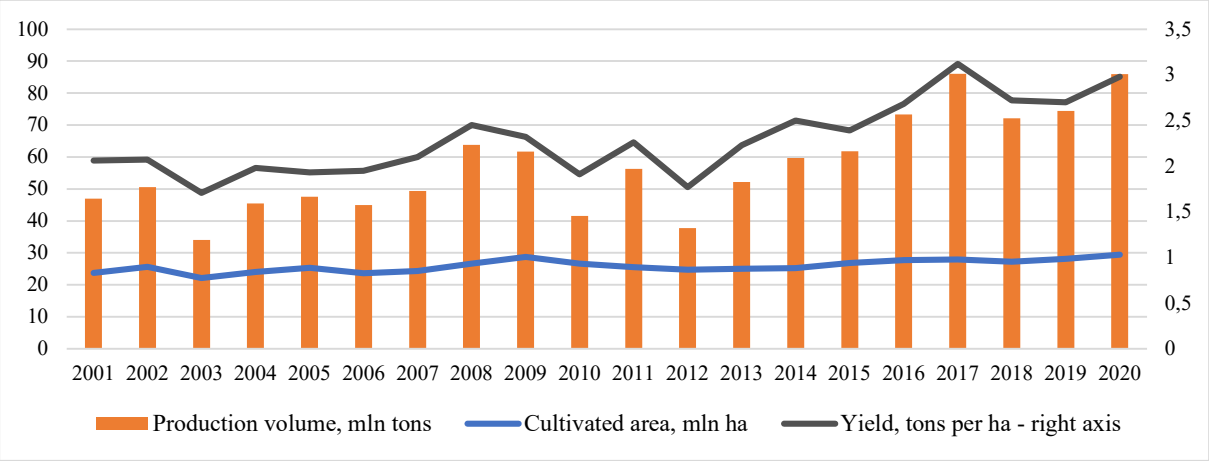
To characterize the wheat export opportunities, dynamics of nominal protection coefficients (NPC) of Russian wheat producers was considered (OECD, 2021). These indicators are measured as the ratio of average domestic producer prices, including subsidies paid per ton of output, to external reference prices. In turn, external reference prices are deep-water port FOB prices less the costs of handling and transportation of wheat to the border. In the context of barrier-free trade conditions, NPC is equal to 1, that indicates compliance of domestic prices with external reference prices. This situation is characterized by equal profitability of grain supplies to domestic and foreign markets.

All mentioned above indicators and estimates for Russian wheat market form an analytical approach to the qualitative assessment of the impact of damping mechanism of wheat export regulation on the main stakeholders of wheat value chain. Such general approach allows us to consider the relevant issues in the first approximation and creates the basis for more in-depth analysis using sophisticated applied economic and mathematic tools and methods.

3. Results and Discussion

Wheat is a major agricultural commodity in Russia. In 2020, wheat accounted for 32% of Russia's crop production and 28% of the country's agri-food exports value. Favorable weather conditions, domestic support of agricultural producers, investments in technological modernization, transport and logistics infrastructure of the grain market, integration into global value chains and strengthening trade and economic relations with importing countries contributed to the development of wheat production. Over the period from 2001 to 2020, wheat production, yield and cultivated area increased by 83%, 45% and 24%, respectively (Figure 1).

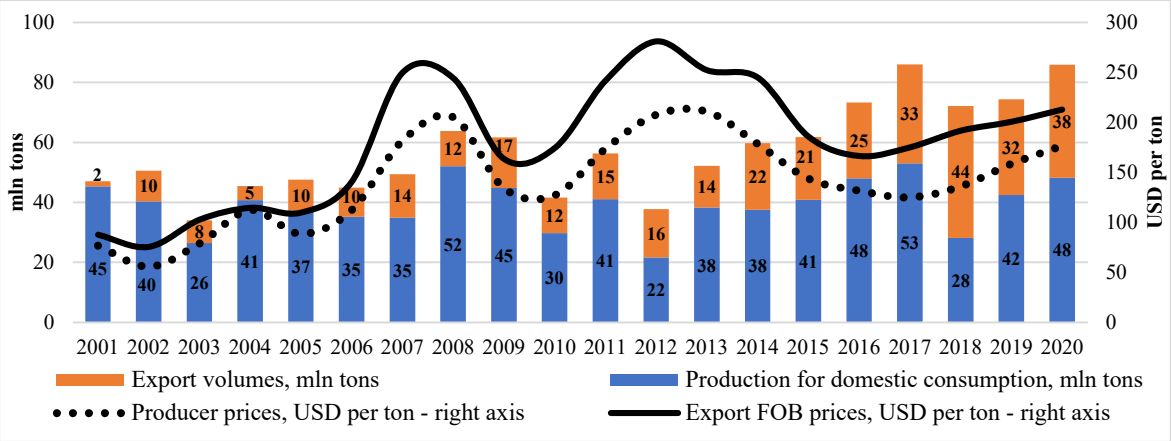
Figure 1. Wheat production, cultivated area and yield in Russia, 2001-2020



Source: Rosstat, 2021

Since 2016, Russia has been the world's largest wheat exporter. The volume of wheat exports is approaching the volume of its production for domestic consumption (Figure 2). Between 2018 and 2020, Russia exported 49% of the wheat produced in the country. Due to significant export volumes domestic wheat prices follow world market prices and largely depend on major importers' demand. At the same time, increasing exports also strengthens its influence on the development of the Russian market. As evidenced, export supplies reached 44 million tons worth USD 8.4 billion in 2018.

Figure 2. Wheat production and export volumes, producer and export prices, 2001-2020



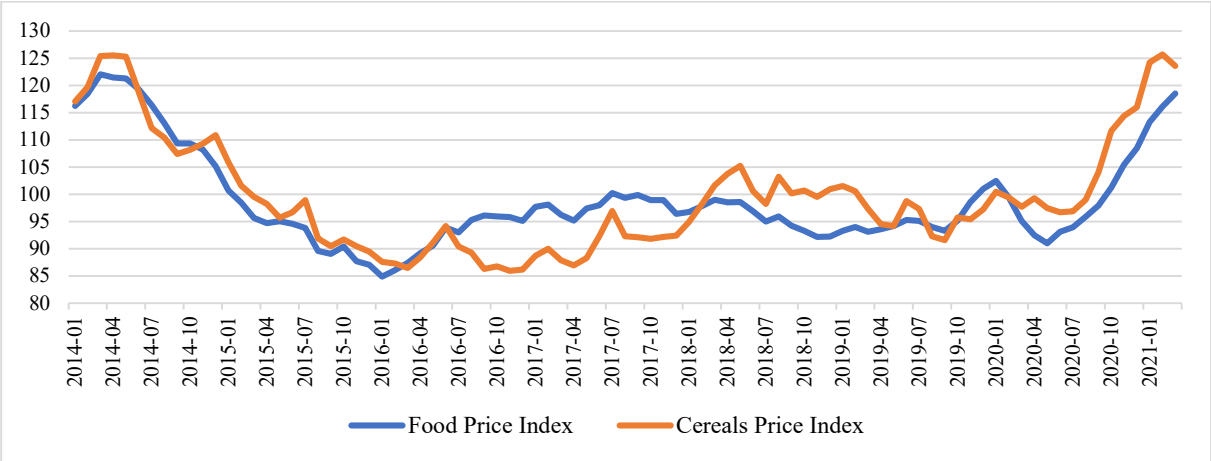
Source: Rosstat, ITC Trade Map and OECD PSE database for Russia, 2021

Meanwhile, price volatility in major agricultural markets has doubled since 2000 (World Bank, 2011) and global food prices have been consistently rising since the mid-2020 (Figure 3). Since

July 2014, the highest monthly average increase in the FAO cereals price index was recorded in January 2021. Prices for cereals reached the highest levels in February 2021.

The growth of world prices was caused by the recovery of demand in China, unfavorable weather conditions, disruption of product supply chains and liquidity injections into the USA and EU economies to mitigate the impact of the COVID-19 pandemic. In addition, global prices were also affected by the measures restricting exports of grains announced by the Russian government in 2021 (Table 1). This spurred export activity and demand of importers who wanted to make their purchases before the export restrictions were put into effect.

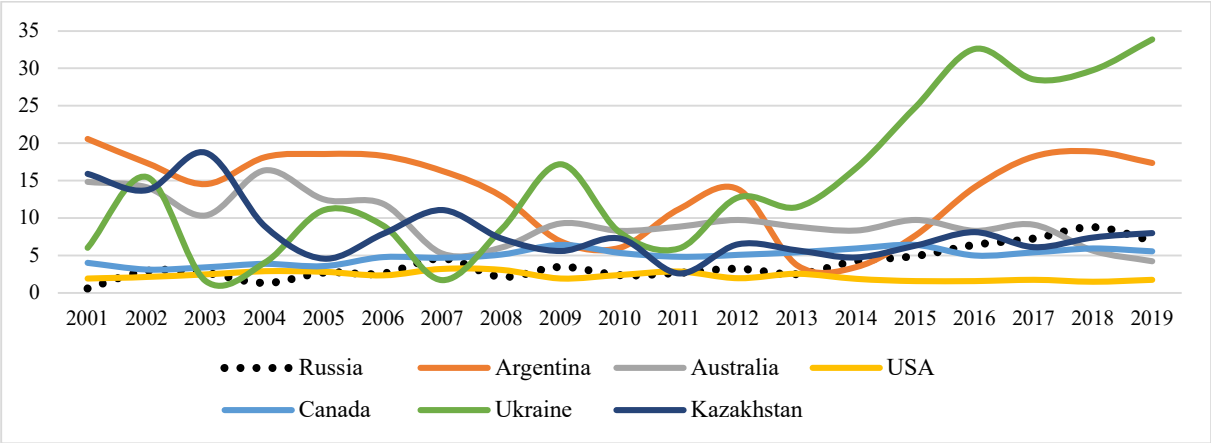
Figure 3. FAO monthly food price index, 2014-2016=100



Source: FAO, 2021

Competitiveness of Russia's wheat export is characterized by the relatively high level of comparative advantage. RCA index for Russian wheat exceeds the similar indices for the USA, Australia, and Canada (Figure 4). However, it is far below the Ukrainian and Argentine indicators.

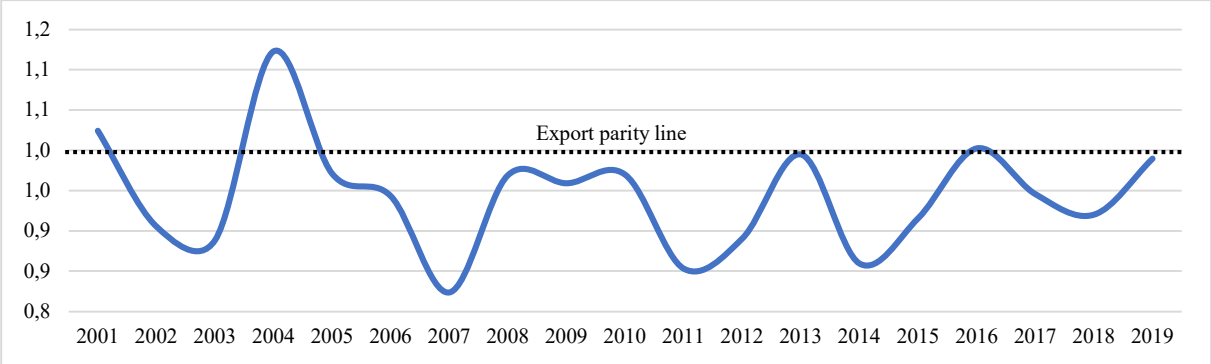
Figure 4. Dynamics of the revealed comparative advantage index for wheat in 2001 – 2019, %



Source: calculations are based on the ITC Trade Map data, 2021

In 2019, domestic wheat prices reached parity with export prices, i.e. NPC for Russian wheat producers was close to 1 (Figure 5). In this respect, over the past decade parity of domestic and external reference prices for wheat was also recorded in 2013 and 2016.

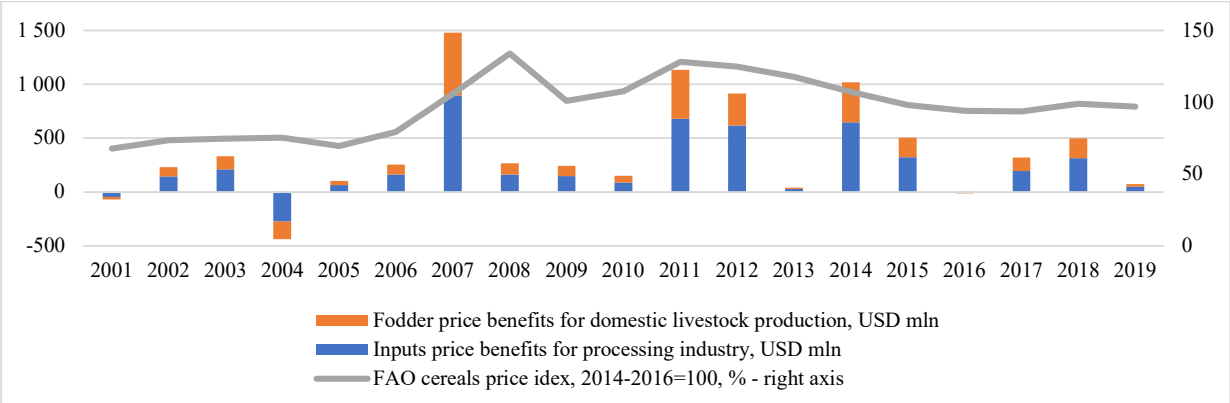
Figure 5. Nominal protection coefficients for Russian wheat producers, 2001-2019



Source: OECD PSE database for Russia, 2021

Regarding the other years, domestic wheat prices were lower than export prices, which helped improve the financial and economic status of domestic wheat consumers - livestock producers and grain processors (Figure 6). For example, in 2011 the financial benefits of consumers who purchased wheat domestically amounted to USD 1.1 billion including benefits on reduced fodder prices to the tune of USD 455 million. After that, the amplitude of benefit fluctuations has gradually declined. The downward trend in benefits to domestic consumers from domestic wheat purchases indicates a levelling-off of returns from domestic and foreign market operations. In general, consumers' benefits depend on a number of factors, primarily such as the level of world prices, the Ruble exchange rate, the volume of production and supply of wheat in the domestic market, as well as state policy measures to support production, to encourage or limit trade.

Figure 6. FAO cereals price index and transfers from wheat producers to wheat consumers, 2001-2019



Source: FAO and OECD PSE database for Russia, 2021
Note: the benefits were converted to USD value units using the average annual exchange rates reported by the Bank of Russia

In the context of export parity and significant export volumes, domestic wheat prices follow world market prices and largely depend on major importers' demand. It is very likely that the influence of domestic demand on the development of the Russian wheat market will weaken in the future due to a number of reasons. First, under conditions of export parity, the reduction of indirect transfers from producers to consumers may reduce the competitiveness and export opportunities of both livestock and wheat products as well as flour. It should also be noted that high values of nominal protection coefficients of meat producers in Russia cause the lack of strong incentives for beef and pork exports, while the utilization of wheat and flour products

export potential would increase their current export values by as little as USD 186 mln (ITC Export Potential Map, 2021).

Secondly, given the stagnation of the Russian economy and the decline in real disposable income of the population by 11% (Rosstat, 2021), the consumer demand for meat products will be shrinking. The reduction in domestic demand, the lack of price incentives for exports, the inaccessibility of markets in many countries for Russian meat producers due to the unfavorable epizootic situation in Russia may lead to stagnation in livestock production and reduced use of grain for fodder purposes. In addition, the depreciation of the Ruble also has a negative impact on domestic demand and the prospects of those agri-food sectors that use grain as feed or raw material.

Thus, external factors will strengthen their impact on the development of the grain complex of Russia against the backdrop of weakening domestic factors. This means that with the growth of grain export the risks of domestic price volatility under the influence of the world market conditions and the Ruble exchange rate are increasing.

To mitigate such risks Russian government without any justifications decided to introduce a permanent damping mechanism in the form of a floating export duty on wheat. Possible effects of export restriction measures on the main stakeholders of grain food chains should be taken into account when assessing the feasibility of applying a floating duty under current conditions. In this regard it is important to understand to what extent the growth of prices in the domestic wheat market depends on the increase in world quotations. According to Rosstat, in December 2020 wheat producers' prices rose by 41.8% in rubles and by 20.5% in US dollars as compared with the same period of the preceding year (Table 2). Over the same period the FOB contractual prices increased by 39% in rubles or by 18.1% in US dollars. Estimations demonstrate, that under the existing conditions the growth of domestic prices for wheat by 58% was determined by the increase of the world prices. The contribution of the depreciation of the national currency to the increase in domestic prices was 46%, and other factors affecting the difference between contract export prices and producer prices led to a decrease in domestic prices by 4%. In other words, under current conditions, in addition to world prices, the ruble exchange rate has a significant impact on domestic wheat prices.

Table 2. Average producer prices and average FOB export prices of wheat in Dec. 2020 vs. Dec. 2019

	December 2019	**December 2020**	**December 2020 vs December 2019, %**
Producer prices:			
RUB/ton	10,459	14,830	141.8
USD/ton	166.2	200.3	120.5
Contractual export FOB prices:			
RUB/ton	12,788	17,772	139.0
USD/ton	203.2	240.0	118.1
Difference between contractual export prices and producer prices:			
RUB/ton	2,329	2,942	126.3
USD/ton	37.0	39.7	107.4

Source: Rosstat, Bank of Russia and ITC Trade Map, 2021

Note: Russian ruble prices were converted into US dollar prices using the average annual exchange rates reported by the Bank of Russia. Over the period under review, the Ruble depreciated by 17.7%

The next important issue is to substantiate the level of the price cap which, if exceeded, triggers the damping mechanism. According to foreign trade statistics, after the ban on grain and flour

exports effective from August 15, 2010 to July 1, 2011 was lifted and until mid-2015 there was a long period of relatively favorable external conditions when the average price of wheat amounted to USD 256/ton. The market then sagged and the average price of wheat exports sank to USD 176/ton. The period of low prices lasted until October 2018. After that, the frequency of fluctuations in export prices around the mark of USD 200/ton intensified while their amplitude decreased. Overall, over the past three years, the average export price has stayed at USD 202/ton. This is likely to have been used as justification for linking the floating export duty mechanism to the export price of USD 200/ton.

However, data from specialized information resources on prices show that USD 200/ton is the minimum FOB price offered for Russian wheat at deep-water ports recorded in 2020. At the end of January 2021, export prices for wheat briefly exceeded USD 300/ton. It is evident that in the context of high world food prices (not only grain prices) the proposed price cap for imposing the damping mechanism in the grain market needs to be reviewed and thoroughly justified.

It should be noted that grain supplies to the world market are associated with certain costs borne by exporters. Such costs include transportation of grain to ports, as well as grain handling costs, port fees, fumigation, and export paperwork processing costs. Analysis of the current level of these costs shows that the largest share of them is transportation costs - about USD 25 per ton. The integrated service rate at grain terminals in Russia is at the level of about USD 15 per ton and gradually decreasing. Probably in this context the optimal amount of excess of average export FOB prices over the wheat producer prices (transportation costs and grain terminal service fees) would be about 40 USD per ton. This is slightly less than the annual average for 2018-2020 (USD 45 per ton), but exceeds its value in 2020 (Figure 2). Grain exporters benefit from VAT refunds for exported products, as well as the amounts of excess of their margins over transportation and logistics costs.

Taking into account the estimate of trade and logistics costs for grain exports at the export contractual price of USD 280 per ton, under floating duty implementation deliveries would take place if the producers' price does not exceed USD 185 per ton. In this case, based on the assumption that the exports amount to 30 million tons, USD 1.7 billion (approximately RUB 125 billion) would be withdrawn from exporters in the form of duties. This amount of withdrawal is almost equal to the amount of state support provided to agricultural producers. Based on the assumed total sales of 45 million tons, the producers who sell wheat on the domestic market will receive USD 1.5 billion less. The government plans to distribute funds taken from exporters to regions based on their share in the overall Russian grain production. Meanwhile the shortfall in incomes of those producers who sold wheat on the domestic market would not be subject to compensation.

Thus, the mechanism introduced by the government for the withdrawal of income from producers and exporters of wheat in the context of high world grain prices, economic stagnation, shrinking disposable incomes and increased risks of further devaluation of the national currency would lead to deterioration of the financial and economic situation, reduction of investment opportunities and technological lagging of Russian wheat producers behind their competitors in the world market. Simplification of the technological mode would lead to a drop in yields and a decrease in wheat production already in the medium term, negatively affecting not only exporters but also consumers. To minimize the adverse effects of the introduction of a floating

duty and to balance the interests of wheat producers and consumers the damping mechanism should be adjusted by raising the price ceiling for calculating the duty to USD 250 (November 2020 level) and by reducing duty rate to 50%. This approach, aimed at relatively soft export restrictions in the face of high world grain prices, is not consistent with the outcomes of other authors proving the harmful nature of any export restrictions.

However, against the backdrop of free movement of goods within the Eurasian Economic Union such restrictions are even milder and can lead to Russia's regional partners using a scheme in which they will actively export their grains while covering shortages in their own markets with relatively cheap Russian wheat. Thus, stimulated grain exports of Eurasian integration partners can contribute to a certain extent to support Russia's domestic grain prices.

Taking into account the past years' experience in a favorable world price situation, it is important to focus efforts on increasing production and improving the competitiveness of wheat. This would help improve the financial and economic situation, expand investment programs in the sector and strengthen global and regional value chains. As mentioned above, the development of the grain sector would also strengthen the competitiveness of domestic livestock farming in the long term.

Besides, a comprehensive set of measures regulating the grain market also implies subsidizing grain consumers, support for the development of transport and logistics infrastructure, and targeted assistance to vulnerable groups of the population. This is especially important in the context of a devaluating national currency, decreasing consumer incomes and increasing poverty. The rise in world prices is a global challenge, and a policy aimed at social protection, increasing production and exports would be an effective response to it. This policy measures are fully consistent with the publications of other authors.

4. Conclusion

Since 2016, Russia has been the world's largest wheat exporter due to its competitiveness characterized by the relatively high level of comparative advantage. The volume of wheat exports is approaching the volume of its production for domestic consumption. In the context of export parity and significant export volumes, domestic wheat prices follow world market prices and largely depend on major importers' demand. However, under current conditions, in addition to world prices, the ruble exchange rate has a significant impact on domestic wheat prices. To restrain the impact of rising world prices on the domestic cereals market, a permanent damping mechanism in the form of a floating export duty on wheat has been introduced in Russia since June 2021. This mechanism in the context of high world grain prices, economic stagnation, shrinking disposable incomes and increased risks of further devaluation of the national currency would lead to deterioration of the financial and economic situation, reduction of investment opportunities and technological lagging of Russian wheat producers behind their competitors in the world market.

To mitigate the adverse effects of export restrictions the damping mechanism should be adjusted by raising the price ceiling for calculating the export duty and by reducing duty rate to 50%. This adjustment may balance the interests of stakeholders in the case of high world wheat prices.

However, to provide the long-term frameworks for domestic grain market development, Russian government efforts should be focused on increasing production and improving

the competitiveness of wheat. A comprehensive set of measures regulating the wheat market also implies subsidizing wheat consumers, support for the development of transport and logistics infrastructure, and targeted assistance to vulnerable groups of the population. Such approaches would support grain consumers while respecting the interests of producers and exporters.

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References

Balassa, B. (1977), "Revealed Comparative Advantage Revisited: An Analysis of Relative Export Shares of the Industrial Countries, 1953-1971", *Manchester School of Economic and Social Studies*, Vol. 45, no. 4, pp. 327-344, ISSN 1465-9957, DOI 10.1111/j.1467-9957.1977.tb00701.x

Bank of Russia, Ruble exchange rate, [Online], Available: http://www.cbr.ru/statistics/macro_itm/svs/, [Accessed: 20 Apr. 2021]

FAO, Food and Agriculture Organization of the United Nations, FAO Food Price Index, [Online], Available: http://www.fao.org/worldfoodsituation/foodpricesindex/en/, [Accessed: 20 Apr. 2021]

Götza, L., Glaubena, T. and Brümmer B. (2013), "Wheat export restrictions and domestic market effects in Russia and Ukraine during the food crisis", *Food Policy*, vol. 38, pp. 214-226, ISSN 0306-9192, DOI 10.1016/j.foodpol.2012.12.001

ITC Export Potential Map, International Trade Center, [Online], Available: http:// https://exportpotential.intracen.org/en/, [Accessed: 15 Apr. 2021]

ITC Trade Map, International Trade Center, Trade statistics for international business development, [Online], Available: http://www.trademap.org, [Accessed: 15 Apr. 2021]

Ksenofontov, M., Polzikov, D. and Urus, A. (2019), "Food Security and Grain Market Regulation in Russia", *Studies on Russian Economic Development*, vol. 30, pp. 606–613, ISSN 1531-8664, DOI 10.1134/S1075700719060078

Mitra, S. and Josling, T. (2009), "Agricultural Export Restrictions: Welfare Implications and Trade Disciplines", IPC Position Paper, [Online], Available: https://www.researchgate.net/publication/331478130_Agricultural_Export_Restrictions_Welfare_Implications_and_Trade_Disciplines, [Accessed: 15 June 2021]

OECD, Organisation for Economic Co-operation and Development, PSE database for Russia, 2021, [On-line], Available: http://www.oecd.org/agriculture/topics/agricultural-policy-monitoring-and-evaluation, [Accessed: 20 Apr. 2021]

OECD, Organisation for Economic Co-operation and Development, Russia estimates of support to agriculture, 2021, [On-line], Available: http://www.oecd.org/russia/producerandconsumersupportestimatesdatabase.htm, [Accessed: 20 Apr. 2021]

RBC, Wheat exports will be restricted by a new duty. How this affects the price of bread, 2021, [Online], Available:

http://www.rbc.ru/business/04/02/2021/601c2d669a794731d5cb127e, [Accessed: 10 Apr. 2021]

Rosstat, Federal State Statistics Service, [Online], Available: http://rosstat.gov.ru/enterprise_economy, [Accessed: 30 Apr. 2021]

Welton, G., (2011), "The Impact of Russia's 2010 Grain Export Ban", Oxfam Research Reports, [Online], Available: http://www.oxfam.org/en/research/impact-russias-2010-grain-export-ban, [Accessed: 10 Apr. 2021]

World Bank, Responding to Global Food Price Volatility and Its Impact on Food Security, paper prepared for the Development Committee Meeting, April 16, 2011, [Online], Available: http://reliefweb.int/sites/reliefweb.int/files/resources/DC2011-0002%28E%29 FoodSecurity.pdf, [Accessed: 1 Apr. 2021]