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The Rouble Crisis and Russian Wheat Export Controls

The Russian government implemented a wheat export tax in February 2015 to reduce food inflationary pressures resulting from the rouble's dramatic devaluation. This article discusses the causes of the rouble's instability and volatility, and the effects of the export controls on domestic wheat and bread prices. Although such export taxes are appealing to governments due to their low financial costs, we show that their economic costs are substantial in the long run. We suggest desisting from such trade-oriented measures and instead helping consumers adapt to high food prices.

Russia is suffering from a significant rouble crisis and its consequences. The rouble exchange rate has been very unstable over the last year and a half, rising from 34 roubles per US dollar on average in January 2014 to 70 roubles per dollar in February 2015 before declining again to about 50 roubles per dollar in May 2015 (see Figure 1).

An accurate projection of the future development of the rouble seems impossible and is beyond the scope of this paper. Instead, the article assesses the causes of the rouble volatility and the repercussions for the Russian food and agricultural markets. It also evaluates the wheat export controls that were introduced to mitigate the effects of the rouble's devaluation on agricultural markets. An export tax on the Russian wheat market was agreed upon in December 2014 and implemented on 1 February 2015.

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Causes of the rouble's instability

The rouble's instability is a result of international economic policies, but it has been augmented by the economic impact of internal Russian policies (both economic and non-economic). The main economic cause is the decline of international oil and gas prices (see Figure 2).[1] Since about 70 per cent of Russia's exports in value terms are oil and natural gas, the oil price plunge strongly decreased demand for the rouble. Hence, the 59 per cent drop in average oil prices, from about $108 per barrel to about $44 per barrel, led to a drastic decline in foreign exchange earnings. At the same time, the demand for foreign currency increased, as the rouble's devaluation spurred the outflow of capital. The rise in the value of the US dollar contributed further to Russia's increased demand for foreign currency and to the rouble's devaluation.

The Central Bank of Russia tried to reduce this devaluation through heavy intervention in the market for foreign exchange. This policy has most likely stabilised the value of the rouble, but it was also highly expensive. The amount of foreign exchange reserves held by the Central Bank of Russia dropped significantly between October 2014 and April 2015 (see Figure 3).

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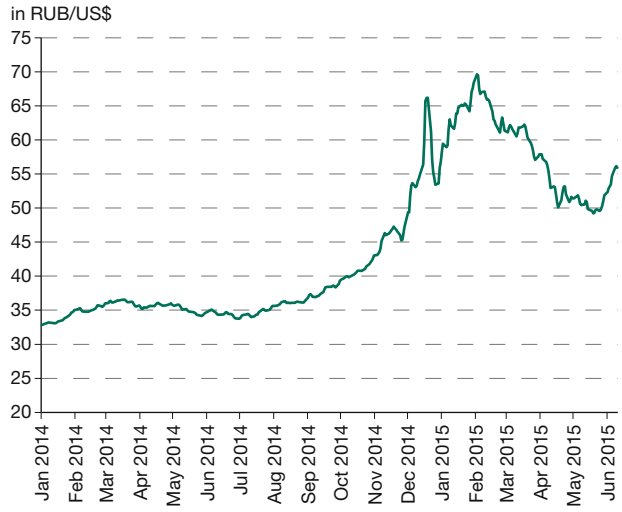
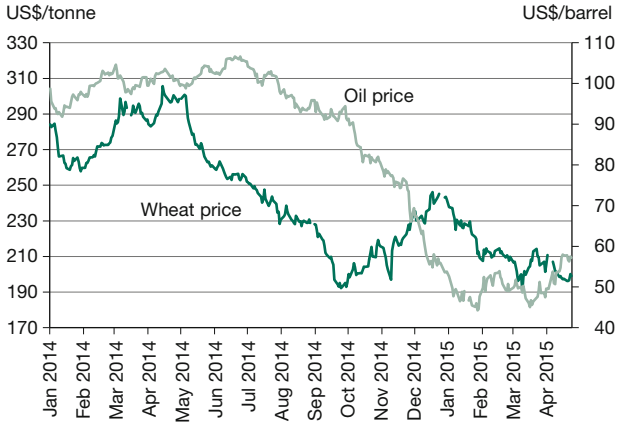
1 W. Liefert, O. Liefert: Russia's Economic Crisis and its Agricultural and Food Economy, in: Choices, Vol. 30, No. 1, 2015.

Figure 1
Development of the rouble exchange rate, 2014-15



Source: www.quandl.com.

Figure 2
Global wheat and oil price development, 2014-15



Source: http://www.finanzen.net/rohstoffe.

These purely economic determinants of the rouble crisis were reinforced by political determinants. The sanctions imposed by the EU and the US have affected Russian capital markets, leading to an increase in the demand for foreign currencies and thus a further devaluation of the rouble. In addition, Russia implemented import restrictions for food products, which has also decreased demand for roubles. It can be assumed that Russia imported food from the cheapest supplier on the world market before the crisis but had to change the origin of its imports from low-cost to high-cost suppliers due to the import sanctions. Thus, import expenditures (measured in roubles) increased, leading to a further shift of demand for foreign exchange. This effect was significant, as Russia is highly dependent on food imports (see Figure 4).

Impact of the rouble crisis

Rise in inflation

The devaluation contributed to an increase in the rate of inflation from 6.5 per cent in 2013 to 11.4 per cent in 2014, and to 16.7 per cent in February 2015. The price index for the consumer basket of goods increased somewhat less than the index for food products (see Figure 5). This might be partly due to the non-uniform effect of the rouble's devaluation on domestic prices: a devaluation leads to a change in relative prices. In particular, prices of tradeables increase strongly as a direct effect of a devaluation, whereas prices of non-tradeables increase to a lesser extent. Thus, prices of food imports in Russia were strongly affected by the devaluation and increased substantially.

Most agricultural products are not only tradeables but also suitable for storage. Thus, if prices are expected to increase, producers and traders may prefer not to sell and instead to build up stocks. Consumers may prefer to buy more than they normally would and thereby increase the quantity of stored products. While each individual consumer may have little storage capacity, the large number of households can combine to create a major impact.

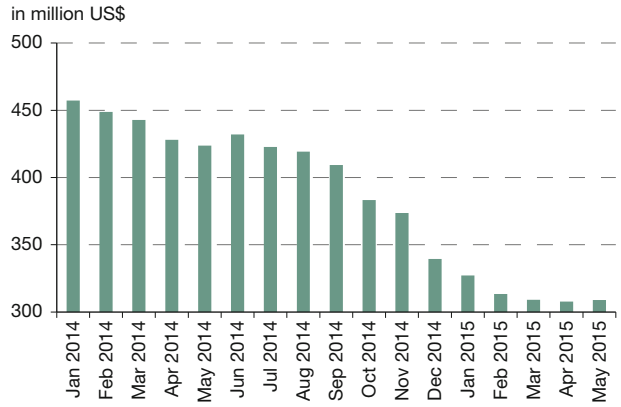
The Russian embargo also affected food price inflation. Food availability declined, thus increasing food prices. It should be noted, however, that prices for food products in Russia are also determined by the active intervention of the government in food markets. Unfortunately, there is no detailed information available on the specifics of this intervention. It has been reported that retail shops have been asked not to increase food prices, particularly of those food items which are produced in Russia.[2] While it is not clear how the Russian government has enforced this request, communities do have the means to control retailers.

Increase in volatility

A primary cause of increased volatility from day to day is the rise in uncertainty. Changes in the fundamentals of price formation will affect the price level at the point in time when new information becomes available. But since

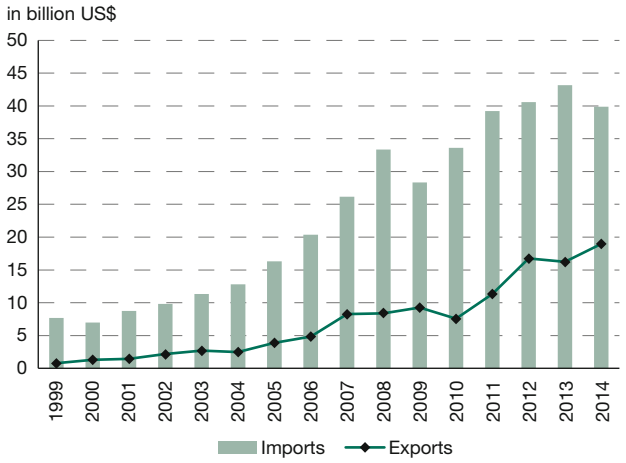
2 K. Krivonos: Russia's restrictions on imports of agricultural and food products: An initial assessment, Food and Agriculture Organization of the United Nations, 2014.

Figure 3
Russia's foreign exchange reserves



Source: Central Bank of Russia.

Figure 4
Development of food imports and exports in Russia, 1999-2014



Source: Global Trade Information Services.

changes in fundamentals do not normally occur on a daily basis, it is apparent that the significant fluctuations of daily prices stem from man-made uncertainty and a lack of instruments to cope with this uncertainty.

Figure 6 highlights the increase in volatility of global wheat and oil prices since January 2014. The volatility of these prices increased significantly beginning in December 2014. It should be noted that global wheat prices further increased at that time, whereas the decrease in oil prices accelerated (see Figure 2), which may have reinforced political concern within the Russian government.

Introduction of the wheat export tax

There is no official document declaring the government's objective to intervene in the wheat market. However, some statements made by public administrators do refer to the measure. For example, Prime Minister Dimitry Medvedev stated that wheat export duties were introduced "temporarily, but flexibly enough to enable us to regulate the grain market situation and to provide the people with bread and baked products".[3]

This measure was designed to stop the increase in bread prices in order to contribute to the food security objective and may have been influenced by the public's preferences. According to a recent Russian poll, 55 per cent of respondents said that a country's economic system should be based on "government planning and allocation".[4] Russian authorities explain that the measures are needed to reduce the recent high levels of wheat exports and to ensure adequate grain supplies for the domestic population; the official rationale is to put a stop to the domestic price increases for grain-based consumer products.

In the following, we analyse the effects of the introduced measures with respect to the stated objectives. Moreover, we explore whether alternative measures were available that could have been more targeted and less costly. We also develop some hypotheses on how the introduced measures will affect global wheat markets.

The introduction of measures such as an export ban to limit grain exports had been under discussion since September 2014. In mid-December, Russian Agricultural Minister Nikolai Fyodorov stated that, "We do not plan to do anything apart from invading this market with government intervention in the form of grain procurement for the government fund."[5] However, less than a week later, Deputy Russian Prime Minister Arkady Dvorkovich announced the introduction of a wheat export tax, declaring, "We'll draft a resolution on grain export duties, this will be done in 24 hours."[6]

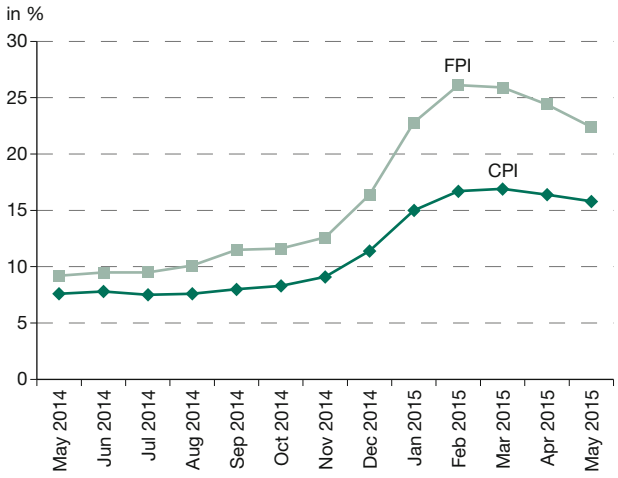
3 Russian govt imposing grain export duties, Interfax, 22 December 2014.

4 Russians Increasingly Believe State Planning Better Than Market Economy, The Moscow Times, 27 March 2015.

5 Agricultural minister not discussing grain export ban, Interfax, 16 December 2014.

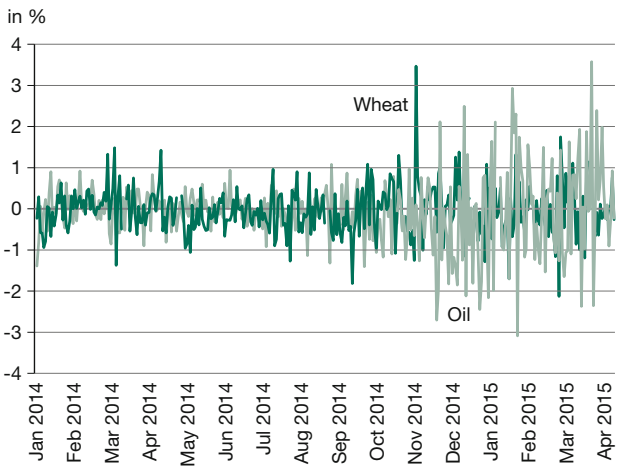
6 Russian govt imposing ..., op. cit.

Figure 5
Development of consumer price index (CPI) and food price index (FPI) in Russia



Source: www.tradingeconomics.com.

Figure 6
Daily changes in global wheat and oil prices, 2014-15



Source: http://www.finanzen.net/rohstoffe.

A decree introducing an export duty on wheat was announced in late December 2014, to become effective 1 February 2015. The levy was set at 15 per cent – but at least 35 euros – of the export price per tonne. In addition, 7.50 euros per tonne would also have to be paid. The tax would not be not levied on exports to countries within the Eurasian Economic Union.

Initially, the regulation was to end in June 2015, with the possibility of an extension. Starting in early December 2014, the authorities have also used administrative barriers to hinder grain exports. Procedures for issuing the phytosanitary certificates required for exporting and shipping grain via ports were tightened. The original export duty was cancelled on 15 May 2015, several weeks earlier than planned, but a modified export duty was introduced on 1 July 2015. According to the new formula, a 50 per cent duty applies if the wheat price is lower than 5500 roubles per tonne, with a minimum duty amount of 50 roubles per tonne.

One may wonder why the Russian government only focuses on wheat exports. Wheat-based consumer goods may be of little importance to the general consumer, but these goods are very important for some poor households. Moreover, the price of bread is a politically important price in many countries. Hence, the political signal of doing something to counter food price inflation may have seemed more important than the economic consequences. Nevertheless, the economic effects are important for the well-being of the Russian population, as well as for international trade.

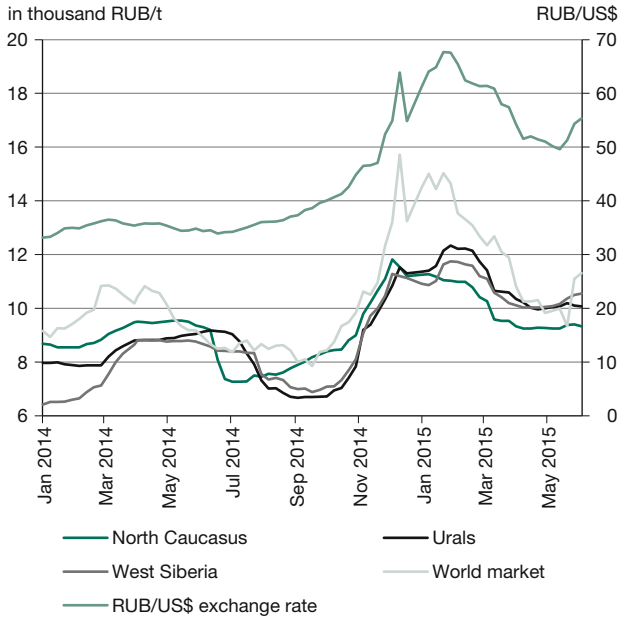
Effects on the domestic price of wheat

The domestic price of wheat in an open economy is directly related to the global market price of wheat. Wheat is traded in US dollars; hence, the Russian export price in roubles is given by the wheat price in dollars in the global market multiplied by the dollar-rouble exchange rate (if we exclude the export tax). Thus, the change of the Russian wheat price in roubles can be caused by a change in the exchange rate, a change in the global market price in dollars or a change in the difference between the global market price and the domestic price, i.e. trade costs. At the time of the decree, it appeared highly unlikely that the rouble would appreciate significantly in the near future and that the global market price for wheat would continue to decrease substantially. As it turned out, the rouble actually appreciated 38 per cent and the global market price for wheat declined 29 per cent between 16 December 2014 and 2 April 2015.

Figure 7 shows the development of regional wheat prices in Russia. Beginning in February 2015, the wheat price started to decrease in all regions. This can be explained by several factors. The rouble's appreciation and the further decrease of the dollar-denominated global market price for wheat both certainly were important factors. It could also be argued that the decline in Russian wheat exports after the introduction of the export tax in February 2015 may have contributed to damping price increases. However, the decline in export quantities does not necessarily imply an increase in market supply in the country. Produc-

Figure 7

Development of global and selected Russian regional wheat prices and rouble exchange rate

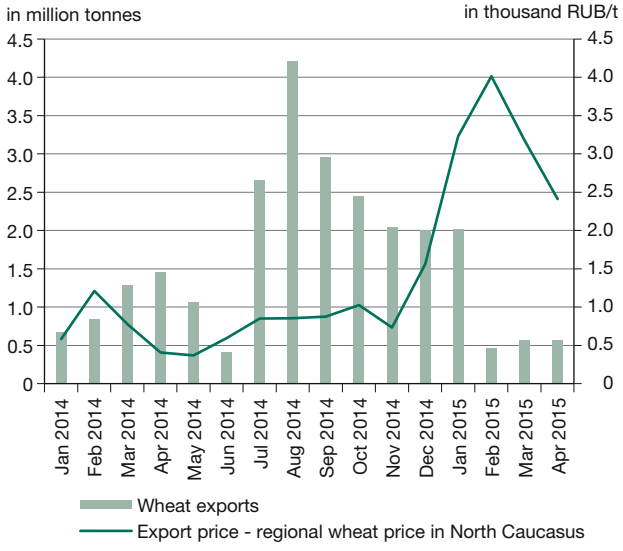


Note: The world market price refers to the Rouen FOB price.

Source: Grain Union of Russia.

Figure 8

Russian wheat exports and the difference between export and regional prices



Source: Global Trade Information Services.

ers of wheat for export could either hold onto their stocks and increase their inventories until the export tax was removed or supply the quantities that had been planned for export to the domestic market.

Wheat traders avoided selling wheat in the world market under the export tax system for two main reasons: first, the profit obtained by the producer was reduced by high transaction costs, and second, the export tax reduced this profit even further. This is also reflected in Figure 8, which shows the difference between the development of the wheat export price and the producer price in North Caucasus, the primary wheat-exporting region in Russia.[7] Transaction costs increased because the Russian government introduced non-market instruments to lower the export volume. Therefore, it became more cumbersome to book freight trains and obtain the phytosanitary certificates required for export. These administrative interventions led not only to higher direct costs for traders but also to an increase in uncertainty. Trade in wheat – particularly international trade – is conducted in contracts that specify not only the quantity and quality of the wheat that is contracted but also the exact time of delivery. If Russian traders are not able to guarantee the exact time of delivery, they suffer from a competitive disadvantage. As the head of the Russian Grain Union contended, "The risks are so unpredictable now that exporters are afraid to sign contracts. When you sign a contract now you cannot guarantee that you will be allowed to ship this volume out of the country."[8]

Figure 7 illustrates that the wheat price in the North Caucasus region declined more than it did in the Urals or West Siberia. This can be explained by the following factors:

- North Caucasus is a wheat-producing region with direct access to the global market via its ports at the Black Sea. It supplies its wheat surplus to the global market and usually does not supply any wheat to internal markets within Russia. Thus, price determination in North Caucasus is strongly influenced by the global market price.

- In contrast, West Siberia and the Urals are both thousands of kilometres away from the Black Sea harbours and thus global market access. Due to the large trade costs, producers there rarely supply wheat to the global market and instead supply their wheat surplus to regions within Russia, particularly the Central region.

7 We use the free on board (FOB) price as the export price. The FOB price is the price paid by the buyer and includes transportation of the goods to the port of shipment and loading costs.

8 Russian Wheat Exporters Weary of Signing New Deals They Cannot Keep, Moscow Times, 17 February 2015.

- From the perspective of a grain trader in North Caucasus, the introduction of an export tax is equivalent to a change in the export price – assuming that trade costs, i.e. transaction[9] and transport costs, remain constant – thus damping regional wheat prices. The export tax has no direct effect on wheat prices in the Urals and West Siberia, since neither region supplies wheat to the global market. However, the price damping effects of the export tax are transmitted indirectly from North Caucasus via third markets to the Urals and West Siberia. Still, due to the high transaction costs, the price damping effects there are lower compared to North Caucasus.

- Finally, wheat production in the Siberian Federal District in 2014 was less than usual, whereas wheat production in North Caucasus was above average in 2014. This supply shortage explains the relatively higher level of wheat prices observed in West Siberia and the Urals in early 2015.

Furthermore, the increase in traders' uncertainty is due to the specifics of their decision-making. Two aspects are of interest. First, the change in the regulation of wheat exports was not introduced by a general law but rather by a decree. A decree can be introduced faster than a change via the legislative process and is generally not openly discussed at length before the decision. Thus, the government's preference for decrees creates more uncertainty and a less favourable environment for exporters. Second, the decree introduced changes for wheat exporters that were to be effective from February through the end of June. However, at the time of the announcement it was not known what the post-June legal situation might be. Indeed, as explained above, the export tax was already removed in mid-May, although a modification and extension of the export duty beginning in July was also announced. If traders had expected the decree to be terminated on 30 June, they could have stockpiled wheat in the expectation of higher export prices thereafter. Doing so would have directly interfered with the intention of the decree, and wheat prices in Russia would not have decreased as much as expected by the government – and might actually have risen.

Unfortunately, there is no official information on wheat storage in Russia. Indeed, there is likely no country that has reliable statistics on wheat storage. Stock-keepers include not only governmental organisations but also private traders, farmers, retailers and even consumers; not all of them reveal information on stock levels, and even the ones that do might not provide accurate information.

9 Transaction costs comprise all costs beyond trade costs, e.g. costs resulting from market uncertainty.

Effects on the domestic prices of bread

Consumers will quite likely not experience any price reductions. For wheat export restrictions to have an effect on bread prices, any decrease in wheat prices must be passed on to the consumer along all stages in the wheat-to-bread value chain. Previous episodes of export restrictions in Russia did not result in any notable price damping effects for consumers. In the spring of 2008, Russia imposed an export tax, but the reduced wheat prices did not lead to a corresponding decrease in flour prices. Instead, the decrease in wheat prices merely increased the difference between wheat and flour prices, enabling the mills to increase their profits while consumers were still confronted with rising bread prices.[10] It must be pointed out that food prices in Russia are currently subject to strict government control.[11] The extent to which the grain processing industry can actually be pushed into passing price decreases on to the consumer is anybody's guess.

Even if the consumer price increases were slightly smaller, this would only marginally improve the security of the food supply. Food security is mostly a problem for poor households (rather than an issue of the general availability of food items). Even assuming that these households spend a major part of their incomes on grain and grain products, the small reduction in grain prices will scarcely improve their nutritional situation, as grain prices constitute only a small percentage of baked goods' prices. Research indicates that a 50 per cent reduction in wheat prices in the Central region of Russia only leads to a five per cent reduction in the price of bread in Moscow.[12]

Economic costs of the export restrictions

Aside from examining whether the export tax will prevent bread price increases, the economic costs of the tax need

10 Bread prices increased as a result of higher energy and labour costs. The price-lowering effects of the export restrictions were so small that they could not prevent increases in bread prices.

11 Due to the drastic devaluation of the rouble and the Russian sanctions on the import of agricultural goods, the prices of largely imported food items have increased. This will especially affect the fruit and vegetable supply. See IAMO: Western sanctions, Russian counter-sanctions and agricultural trade, 15 August 2014.

12 L. Götz, I. Djuric, T. Glauben: Wheat Export Restrictions in Kazakhstan, Russia, and Ukraine: Impact on Prices along the Wheat-to-Bread Supply Chain, in: A. Schmitz, W.H. Meyers (eds.): The Emerging Role of KRU in Global Agricultural Markets: Promise and Concern, Commonwealth Agricultural Bureaux International, 2015.

to be taken into account. It is also worthwhile to contemplate whether the measure is economically sensible.

It should be noted that economic costs are not identical or even related to financial costs. Governments are often particularly concerned about short-run financial costs because these costs are visible and may impact the financial capacity of the government. Hence, export taxes may be assessed positively, as they contribute to revenue, ease financial constraints and contribute – at least somewhat – to the food security objective. Thus, a tool such as an export tax that has no financial costs yet generates budget revenues is quite appealing to governments, even though export controls impose several high long-run costs on the entire economy. First, in the short term, producers and grain traders would experience losses in profit and income as a result of the dampened wheat price level, while consumers would hardly notice any price relief. (However, it should be noted that low grain prices are beneficial for keeping farm animals.[13])

Secondly, experience from the past decade indicates that volatility in international markets – including those for foreign exchange, oil and agricultural commodities – has increased and may continue to rise for some time. Hence, it is interesting to consider the possible effects of specific measures on volatility and the ability of market participants to cope with future volatility. Unforeseeable government interventions in the grain market create uncertainty and higher risk for market participants. Thus, the domestic market will function less efficiently, as the use of forward markets for risk reduction will become more costly. Even more importantly, the export restrictions will make it impossible for Russian grain producers and traders to hedge against price fluctuations in international futures markets. This increasing risk for grain producers and storage facilities will lead to higher costs, and the profitability of wheat production will decrease.

Thirdly, even if the government intervenes in the wheat market for only a limited time, the integration of the Russian grain market into the global market will be diminished for quite a while. Consequently, Russia will become a less reliable and therefore less important grain-supplying country. Grain import contracts for delivery after 30 June 2015 will be deemed uncertain. Since the current government restrictions may continue or even be tightened, Russian grain traders are unsure of their ability to export grain at predictable prices. Foreign importers will only be ready to assume the default risk of Russian grain contracts if the price of Russian grain is lower than the price of grain from other countries. As a result, the Russian grain industry will be negatively impacted for the long term.

Fourthly, in the medium and long term, Russian grain producers will produce less grain due to lower prices and higher price risks. This will decrease Russian grain exports and disconnect the Russian grain sector from international grain markets. Furthermore, investments in the development of the grain sector will likely diminish. Russia has considerable growth potential in the grain sector, but to realise this potential, comprehensive investments, especially private sector investments in modern technologies, are required.[14] Export restrictions decrease private investments. Especially in times of recession, such investments could result in significant and welcome income opportunities.

In summary, the government measures will lead to the separation of the Russian grain sector from international markets. Grain producers and traders will suffer income losses, while consumers will profit little, if at all. In the long term, necessary investments in the strategically important grain sector will diminish. Ultimately, the measures will only impede the goals of a more secure food supply and consumer price moderation.

Alternative measures

Could the Russian government have chosen alternative measures that would not have undermined the functioning of markets and may have contributed to the government's objectives in a more targeted and less costly manner?

The government should desist from market interventions via trade-oriented measures and should focus rather on consumer-oriented measures. In particular, instead of trying to damp domestic food prices, a more effective and cost-efficient response would be to let domestic food prices increase and help the needy adapt. For example, the Russian Grain Union suggests providing food vouchers.[15] Direct income transfers targeted at poor people – especially retirees with small pensions – would also have been more effective and caused fewer market-distorting effects than export controls.

13 A close relationship exists between wheat and feed wheat because the products are interchangeable. High wheat prices are usually accompanied by high feed wheat prices. The promotion of livestock production is a primary aim of agricultural policy in Russia, and substantial subsidies are provided to the livestock sector.

14 T. Glauben, M. Belyaeva, I. Bobojonov, I. Djuric, L. Götz, H. Hockmann, D. Müller, O. Perekhozhuk, M. Petrick, S. Prehn, A. Prishchepov, S. Renner, F. Schierhorn: Eastern breadbasket obstructs its market and growth opportunities, IAMO Policy Brief No. 16, Halle (Saale), 2014.

15 Coupons may help poor Russians cope with bread price rise- farmers group, Reuters, 26 January 2015.