Grain Exports from "Virgin Lands": Threat or Promise?

Gregory J. Brock
Georgia Southern University

Follow this and additional works at: https://digitalcommons.georgiasouthern.edu/econ-facpubs
Part of the Economics Commons, and the Finance and Financial Management Commons

Recommended Citation
https://digitalcommons.georgiasouthern.edu/econ-facpubs/2

This article is brought to you for free and open access by the Finance & Economics, Department of at Digital Commons@Georgia Southern. It has been accepted for inclusion in Finance and Economics Faculty Publications by an authorized administrator of Digital Commons@Georgia Southern. For more information, please contact digitalcommons@georgiasouthern.edu.
With the price of wheat and corn skyrocketing on global markets, farmers in developed countries might rightly question whether developing countries’ grain exports constitute a growing threat to their well-being. This paper discusses grain exporting by two transition countries – Russia and Ukraine – that may be seen as potential competitors to developed country farmers. The paper concludes that in the near term it is unlikely that these two countries will be able to substantially impact world grain markets because of internal problems and government influence in agriculture that make these countries unlike market economies which they might potentially compete with. Specifically, problems include infrastructure, petty interference by local and regional governments, surprise mandates from the federal government, xenophobia, and basic neglect. While foreign investment might potentially partly dismantle barriers to exports, the impact on the overall market will not be great. Without fundamental changes in how these economies operate, their impact on world grain markets will remain modest for some time to come.

Grain Exports from “Virgin Lands”: Threat or Promise?

Greg Brock
Associate Professor of Economics
School of Economic Development, Georgia Southern University

Long part of first Imperial Russia and then the Soviet Union, the Ukraine and Russia have recently become independent countries but still bear the burden of their history. Though located at the center of Imperial Russia and the Soviet Union, Russia has perhaps the heaviest burden in moving away from a past that was quite destructive to the agricultural sector and to agricultural exports in particular. While periods of peace did result in substantial agricultural exporting by the two countries, it never could be sustained and was constantly in jeopardy from political and economic issues. Any czarist era farm entrepreneurship was utterly destroyed in the collectivization of the 1930s in both countries. The collectivization lives on to this day with Ukrainians, for example, just now able to discuss the destruction of the 1930s and debating whether United Nations recognition of the genocide is important. Whether current Ukrainian and Russian (hereafter, UR) farms will be risk seeking or risk averse as grain prices rise will be influenced by this debate.

The potential for UR lands to grow more food than the two nations need has been recognized for a long time. Ukraine was the “breadbasket” of Europe at one time. In the 1950s and early 1960s then Soviet leader Khrushchev assigned future Soviet leader Brezhnev the task of developing “virgin lands” in, among other places, Ukraine and neighboring Kazakhstan. The program brought agriculture, in particular wheat and corn, to the northern grasslands of Kazakhstan where it had not been before. Ukrainian lands were “opened up” and grain production increased. While some lands were not suited for agricultural production leading to severe environmental problems later on, there were other hectares that continue to grow grains to this day. The nomadic herding culture of Kazakhstan that might have led to much less grain production has all but disappeared. Ukrainian yields are higher than Russian yields, but both countries have much
lower yields than modern agricultural practices would suggest is possible (OECD/FAO 2007).

While land remains available for agriculture, with Russia ranked 5th in world agricultural land area (Shagaida and Lerman 2008), there is only limited foreign investment in even the Black Earth lands which are best suited to boost agricultural output in the near future. This is unfortunate as the Black Earth zone which straddles Ukraine and Russia has competitive advantages over other major grain producing areas like Southern Australia in that the zone has a predictable climate, low erosion, and a large supply of both skilled and unskilled labor at low wages (e.g. Trigon Agri A/S, 2007).

Companies encounter a variety of problems when they try and exploit Russia and Ukraine’s comparative advantage in agricultural land including the lack of a land market until 2005 in Ukraine (Luzan 2004) and vague land shares that constitute incomplete ownership of land (Rolfes Jr. 2008). While the Russian federal government tends to neglect agriculture, regional and local governments exercise immense “petty tutelage” over land rights and ownership. Ukrainian authorities behave in a similar way with local authorities even going as far as forcing a new owner of a land title to take on neglected livestock herds as well (OECD/FAO, 2007).

How low wages really are in Russia and how important they are to workers there has only recently been studied. The rural labor force participation rate is lower than in urban areas but is high by international standards. The mean wage in 2002 in rural Russia was 2362 rubles (U.S. $79) with women receiving only 47% of a man’s wage though they are better educated than their male co-workers. Women partly offset the disparity by being able to retire 5 years before men. The gender pay gap is caused by rural Russians generally believing that it is primarily a man’s responsibility to earn money plus simple prejudice by employers against women. Russian rural real wages 2002-2004 increased 15%. Substantial non-wage earnings or other jobs are essential as this wage is 10% below the official subsistence level set by the federal government. Paradoxically, workers who sell products from small but highly productive “private plots” exhibit wages 31% lower than workers who only consume but do not sell such output. Significant private plot output with enough to sell beyond consumption often signals a worker’s ability to get inputs from their formal employer (i.e. a state owned farm) which is another important non-wage benefit. Wages also differ by size of the firm/farm and whether it is privately owned. Most workers still work at state owned institutions with lower pay than the private sector. Workers with the most education are found at medium sized (20-200 employees) firms/farms. A worker’s labor market experience follows standard human capital theory with the labor market favoring younger workers (Ogloblin and Brock 2006a).

With much discussion of the BRIC (Brazil, Russia, India, and China) countries in the media and the new middle class there demanding a diet that drives up agricultural prices among others, private plots are also important to understand in that their productivity can offset demand for agricultural imports. Private plot farming remains important for both urban and rural households for subsistence and extra income. Urban households are increasing their demand for both foreign and domestic agricultural products, but not enough to soak up exports. Rural households have less human capital but offset this with greater possession of agricultural inputs needed on the private plots. A rural household’s possession of land increases household income while
possession of livestock decreases it. The poorest rural households are those with children as the added income of children’s labor does not offset the decline in income of adults as they care for children. Some evidence suggests rural median real income increased substantially 2000-2002, but then was stagnant in 2003 with no changes in the income distribution (Ogloblin and Brock 2006b). A similar situation probably exists in the Ukraine, though no formal study of rural Ukrainian households could be found. Thus, while urban households in Russia and Ukraine may increase their income enough to impact demand, rural households are not likely to add to this demand impact. If weather conditions are poor, the federal government may ignore market principals and interfere with exports by demanding that most or all domestic output remain in the country using customs duties or export tariffs.

Infrastructure also blocks both countries from fully participating in world grain markets. Ukraine has problems with both ports and its railway system being inadequate to transport Ukrainian wheat to world markets and wheat from neighboring Kazakhstan as well (Reuters, 2007). Both access to roads/railroads and the quality of roads/railroads are also a perennial problem in Russia. While transport access was not found to influence large farm performance at the end of the Soviet era (Brock 1996/1997), improving market conditions have made transportation a constraint at least with procurement as well as production. In addition, elevators and drying facilities are in short supply as sown acreage increases. What elevators and drying facilities do exist are often below international standards requiring further investment (OECD/FAO, 2007). And along with transportation problems, permits and regulations that may or may not be enforced plague the entire field to port journey (MacDonald, 2007). With xenophobia perhaps the worst it has been in a decade (Dresen, 2008), this local “petty tutelage” is probably getting worse.

Purchased farm inputs also hinder agricultural growth and exporting. Purchased inputs are defined as machinery (tractors and harvesters), fertilizer, fuel, seeds and animal feed. In Russia, these inputs are often supplied by a monopoly or near monopoly (e.g. natural gas and electricity monopolies), 90% of tractors (5 firms), 95% of grain harvesters (2 firms), 74% of nitrogen fertilizers (10 firms), 70% of phosphorous fertilizers (4 firms). As late as 2000, Rosagrosnab (the former Soviet monopoly) still controlled 75% of the farm machinery sales market (Serova and Shick, 2008). Obtaining credit for such purchases is also opaque and difficult to do. A recent survey of farms in three regions of Russia yielded very little finance data as farms were reluctant to disclose information about obtaining credits. As land cannot be used as collateral, farms remain beholden to local and regional administrations to help get what few loans they can afford. Large agro holdings have sprung up to partly address this problem through vertical and horizontal integration (Rylko et. al., 2008). Though the Ukrainian situation is similar, Ukrainian farms still must buy many of these inputs from Russia through the old Soviet channels, in particular oil and gas. Indeed, though Ukraine has better soil and yields than Russia, it cannot compete with Russia (and another neighbor, Kazakhstan) in the potential for the federal government to use large windfall oil and gas profits to subsidize agriculture well in to the future and/or hold the price of gasoline and oil well below market value. In 2007, the worst drought in 100 years added to Ukraine’s disadvantage.

Infrastructure also blocks both countries from fully participating in world grain markets. Ukraine has problems with both ports and its railway system being inadequate to transport Ukrainian wheat to world markets and wheat from neighboring Kazakhstan as well (Reuters, 2007). Both access to roads/railroads and the quality of roads/railroads are also a perennial problem in Russia. While transport access was not found to influence large farm performance at the end of the Soviet era (Brock 1996/1997), improving market conditions have made transportation a constraint at least with procurement as well as production. In addition, elevators and drying facilities are in short supply as sown acreage increases. What elevators and drying facilities do exist are often below international standards requiring further investment (OECD/FAO, 2007). And along with transportation problems, permits and regulations that may or may not be enforced plague the entire field to port journey (MacDonald, 2007). With xenophobia perhaps the worst it has been in a decade (Dresen, 2008), this local “petty tutelage” is probably getting worse.

Purchased farm inputs also hinder agricultural growth and exporting. Purchased inputs are defined as machinery (tractors and harvesters), fertilizer, fuel, seeds and animal feed. In Russia, these inputs are often supplied by a monopoly or near monopoly (e.g. natural gas and electricity monopolies), 90% of tractors (5 firms), 95% of grain harvesters (2 firms), 74% of nitrogen fertilizers (10 firms), 70% of phosphorous fertilizers (4 firms). As late as 2000, Rosagrosnab (the former Soviet monopoly) still controlled 75% of the farm machinery sales market (Serova and Shick, 2008). Obtaining credit for such purchases is also opaque and difficult to do. A recent survey of farms in three regions of Russia yielded very little finance data as farms were reluctant to disclose information about obtaining credits. As land cannot be used as collateral, farms remain beholden to local and regional administrations to help get what few loans they can afford. Large agro holdings have sprung up to partly address this problem through vertical and horizontal integration (Rylko et. al., 2008). Though the Ukrainian situation is similar, Ukrainian farms still must buy many of these inputs from Russia through the old Soviet channels, in particular oil and gas. Indeed, though Ukraine has better soil and yields than Russia, it cannot compete with Russia (and another neighbor, Kazakhstan) in the potential for the federal government to use large windfall oil and gas profits to subsidize agriculture well in to the future and/or hold the price of gasoline and oil well below market value. In 2007, the worst drought in 100 years added to Ukraine’s disadvantage.
Related to purchased inputs is the problem of bookkeeping and determining exactly what a farm owns or has leased. During the Soviet era, farms did not care about valuing their assets as the objective was to maximize output on federal owned land with little attention paid to cost and much attention paid to being big. Money itself was “passive” with physical indicators such as gross output being far more important to a farm manager. With the collapse of the Soviet Union, sheer inertia has kept farms from changing over to profit maximizing behavior in this regard. Reported values of capital stock on a farm often still use depreciation methods from the earlier era. Centrally decreed “norms” or coefficients are used to depreciate equipment and structures that may or may not have any relation to the market prices of these inputs. Such poor accounting has rendered the aggregate capital stock value figures found on most farm books completely useless in analyzing the potential for a farm to produce. Foreign investors must therefore look beyond standard financial statements to determine whether a farm is a good investment.

In the future, export potential will be influenced by the input/output price ratio or “scissors”. With grain output prices expected to remain nominally higher after a slight decline from the current extraordinarily high levels, opening up exports to the world markets is important. Subsidies and trade barriers can keep grain prices below market values internally. Input prices rising faster than the inflation rate can block farm restructuring and profitability (OECD/FAO, 2007). Further research using foreign company experience inside Ukraine and Russia can reveal if world market prices are penetrating areas such as the Black Earth zone. The spreading of Foreign Direct Investment beyond concentration in a few large regional economies (Brock, 2005) would also be an indicator of growing export potential.

The Doha round and WTO accession can drive world market prices to penetrate the internal agricultural sector and increase the potential for foreign purchased inputs such as capital investment (Luzan, 2004). While a summary of the Uruguay and Doha rounds with the growing importance of agricultural trade in GATT/WTO is beyond the scope of this article (Gaisford and Kerr, 2004), it is unlikely these protracted negotiations and slow implementation of actual policy changes will have much impact on grain output prices in the near future. Changes in trade would be more subtle with Ukraine and Russia having an official voice, a clear dispute settlement mechanism and improved confidence of foreign investors inside these two countries. While low domestic support countries in the OECD such as Australia are quite correct in insisting that new entrants such as Ukraine and Russia start immediately with similar low levels of domestic support, other OECD countries often are quite hypocritical in insisting on free market policies that they themselves flagrantly ignore.

Ukraine’s use of tax exemptions as the main form of domestic support might be fairly unique but should not block entrance to the WTO. Ukraine unlike Russia is not insisting on export subsidy allowances and has not used them in the past (von Lampe, 2004). Transparency with domestic support measures rather than immediate low levels of support is probably the most practical outcome that can be attained in the short run.

While both Russia and Ukraine were expected to become major agricultural exporters of grains with the fall of the Soviet Union in 1991, their competitive advantages have yet to be realized. While good weather has occasionally led to improved grain exports, fundamental changes in productivity would be necessary to make even one of the countries moderately sized in the world grain export market (Liefert, et. al. 2003). Very high grain prices will not necessarily induce more market oriented relations in these two countries as regional governments may try and seize some or all of the increased revenues. Political chaos in Ukraine and retrenchment in Russia will insure that no breakthrough changes in agriculture can occur. Western firms interested in investing in or simply forecasting Ukraine and Russia’s progress toward agriculture reforms would do well to follow the limited foreign presence in these countries such as the Trigon Agri A/S annual reports cited above.
References


About the Author

Professor Greg Brock earned his PhD in Economics from The Ohio State University in 1989 and his B.A. in Economics from the University of Michigan in 1983. He has also taught Economics at The Ohio State University, Kent State University, Vilnius University (Lithuania), Volgograd State University (Russia), Moscow State University (Russia) and University of Veracruz-Jalapa (Mexico). Professor Brock worked as a Program and Project Evaluator for USAID/Moscow from 1996-1998, and as an Economic Consultant for KPMG/Barents Group LLC in Moscow from 1994-1995. His research interests are Transition Economies and Economic Development with article list at coba.georgiasouthern.edu/depts/ed/SedPublications.html#purbrock.