

PRICE DISPARITY AS A FACTOR UNDERLYING THE CURRENT DOWNTURN IN RUSSIA'S AGRARIAN ECONOMY

Naylya R. Amirova¹ and Lyudmila V. Sargina¹

Abstract: This paper examines the deformation of agrarian relations in Russia due to price disparity. The authors conduct an analysis of the issue's latest state to identify the major factors behind agricultural producer prices chronically lagging in growth behind those within the nation's industrial sector. It is shown that the current disparity between the prices for the major types of agricultural produce is playing a significant part in causing declines in the revenue and profitability of agricultural organizations, precluding the sector from being provided with high-tech equipment and long-term investment, and thwarting efforts to keep agricultural soil fertile and, ultimately, ensure consistent food security for the nation. A key approach to regulating prices within the agrarian sector of the economy is the further development and enhancement of measures of government support for agriculture through lending at acceptable interest rates and easing the credit debt burden on agricultural producers.

Keywords: agrarian relations, investment, profitability, reproduction, soil fertility, credit resources, government support

1. INTRODUCTION

The agrarian sector, as a crucial component of the economy, is a high priority for the nation due to the indispensability of food and the special role it plays in helping to build and maintain human capital, one of the determining factors in the development of an information society, on a competitive level. Therefore, regardless of the country's social-economic development level and its status in the world, each nation strives to resolve as efficiently as possible the issue of ensuring consistent food security through domestically produced food, which has always been among the most significant and pressing national issues. And Russia is no exception here. The success of attainment of national food security depends on a diversity of internal and external factors, like

¹ Plekhanov Russian University of Economics 117997, Russian Federation, Moscow, Stremyanny Lane, 36

slowdowns and declines in the nation's economic growth, adherence to a raw-materials export model of economic development, sizeable food imports, tougher requirements for the competitiveness of food products in the internal and external markets, the aggravation of the confrontation between Russia and the West, the emergence of the Eurasian Economic Union, the worsening of systemic problems in the development of agriculture and the agrarian sphere of the economy as a whole, and the sharp devaluation of the ruble. The interaction of the above factors is conducive to the emergence of a whole new social-economic situation in the agrarian sector amid attempts to resolve the issue of import substitution and consistent provision of the population with economically available domestic food.

It is certain that Russia's existing agrarian policy has produced a number of positive results, especially in the core sector of the agrarian sphere – agriculture. To be specific, the nation's agriculture produces over 12% of its gross social product and its share in total fixed capital stock is 15.7% (Afanasyeva & Panasyuk, 2015). That being said, gains in the production of agricultural produce at year-end 2015 were 3% compared with the same period in the previous year, while the nation's GDP fell by 3.5% year-on-year (Ministry of Economic Development of the Russian Federation, 2016). Having said that, in the end, the nation's agricultural production volumes growing at an outperforming rate amid falling GDP prevented the food complex from having the required impact to enable the nation to achieve rational amounts of import substitution and provide a sound response to the internal and external challenges facing it.

Under present-day conditions, the most critical factor preventing improvement in indicators of the economic efficiency of the activity of the nation's agricultural producers and its agrarian sector as a whole is still the issue of maintaining relative parity between the prices for agricultural produce and those for the means of production for agriculture. It is important to factor in the interests of agricultural producers not only in terms of pricing their output but also in terms of prices for goods and services they may need to consume as part of their production process, which will govern the absolute size of their expenditure and its ratio to their revenue, and, consequently, the overall profitability of agricultural businesses.

2. METHODS

To substantiate the paper's tenets and inferences, the authors resorted to the theoretical analysis and summation of the scholarly literature and employed the following methods of scholarly research: abstract-logical, subject-object, analytical, statistical, and comparative.

3. RESULTS AND DISCUSSION

Throughout the 20th century, beginning with collectivization through to the agrarian reforms of the 1990s, the nation witnessed disproportions in the pricing of agricultural produce and the output of other sectors within the agro-complex. The Law on Parity

between the Prices for Agricultural Produce and Those for Industrial Output and Services Used in Agriculture (1999) pushed for a system of commodity-money exchange between the two domains of the national economy – an intention never really carried out in practice. The current state of price relations within Russia’s agro-industrial complex continues to be characterized by disparity between the prices for agricultural produce. The balanced movement of industrial and agricultural prices with a view to achieving price equivalence consists in the overlapping of the rate of change of prices at which agricultural produce is sold and that of prices at which industrial goods and services used in agriculture are purchased. Optimizing price relations between agricultural output and that of other sectors of the economy will help ensure the profitability of agricultural production and saturate the market with domestic agricultural produce, raw materials, and food.

Over the course of a quarter-century of market transformations, the nation has witnessed a growing disparity between the prices for agricultural produce and those for the factors of agricultural production. To be specific, the period from 1992 to 2010 saw the prices for agricultural produce increase 11.8 thousand times, while the prices for industrial goods and services for agricultural producers rose 50.6 thousand times within the same timeframe. As we can see, that is a price disparity of nearly 5 times between the prices for industrial output and those for agricultural one, which under a market economy has resulted in declining production volumes and a worsening agrarian downturn across the nation (Merzlikin, 2010, p. 47). Analytical data on Russia’s current economic development attest to the continuing trend of inflation in industry outstripping price growth within the agrarian sector (Table 1).

During the last 5-year period, the largest agricultural price growth was recorded in 2011 at 18.6%. In 2012, the prices dropped 0.5%, and then started rising again, registering an increase of 14.1% in 2015. The entire period under review was characterized by higher prices for goods purchased by agricultural organizations. Note that the largest price growth was recorded in 2015 at 15.5%.

Table 1
Indexes of Prices Set by Agricultural Producers and Prices for Industrial Goods and Services Purchased by Agricultural Organizations, %

<i>Indicators</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>
Index of prices set by agricultural producers relative to the previous year	118.6	99.5	107.8	107.9	114.1
relative to 2010	118.6	118.0	127.2	137.2	156.5
Index of prices for industrial goods and services purchased by agricultural organizations relative to the previous year	112.0	106.2	110.0	104.8	115.5
relative to 2010	112.0	118.9	130.8	137.1	158.4

On the whole, across the Russian Federation in 2015 the ratio of the indexes of prices set by agricultural producers to those of prices asked of them for industrial goods and services totaled 98.8%. In addition, one witnessed considerable differentiation in terms of the indexes of prices regionally. The differences in the indexes of prices set by agricultural producers reached 81.4 percentage points (from 104.7% to 186.1%), versus 57.5 percentage points for industrial goods and services purchased (from 98.1% to 155.6%).

37 constituents of the Russian Federation (exclusive of autonomous okrugs forming part of an oblast) exhibited a ratio that was not in favor of agricultural producers. In Vladimir, Vologda, Belgorod, Tver Oblasts and the Karachay-Cherkess Republic the index of prices from agricultural producers was 8.5–12.5 percentage points lower than that of prices for industrial goods and services purchased.

By contrast, 43 RF constituents demonstrated the reverse trend. To be specific, in the Altai Republic, Saratov Oblast, the city of Sevastopol, and Chukotka Autonomous Okrug the index of agricultural producer prices was 13.2–83.8 percentage points higher than that of prices for industrial goods and services purchased.

Despite some improvements in terms of the evening up of growth rates for the prices received and those paid, there is still some price disparity remaining that needs to be remediated.

Under present-day social-economic conditions, the agrarian sector of the economy has been developing under the impact of economic sanctions, which has resulted in noticeable changes in the balance between the volumes of food imports and exports in the Russian market. It is quite apparent that this trend influences both the volumes of products being substituted and their prices. Statistical research attests to significant hikes in the prices for agricultural produce during the period 2014–2015. In 2015, the farm prices for livestock products, in particular, increased by 2.4%, eggs – 13.7%, and milk – 2.9%, relative to 2014. Meat product prices in 2015 rose the highest at the beginning of the year, which was due to the ruble's sharp weakening relative to the world's major currencies. The second half-year period saw a ramp-up in the production of poultry and pork. The nation's high level of self-sufficiency in these products resulted in their prices stabilizing and dropping by the end of the year. By contrast, the nation witnessed the reverse of this situation in the beef market. With a decline in domestic cattle meat production, a drop in imports of cattle meat, and a dip in the population's purchasing power, as well as an orientation toward the cheaper types of meat, the nation experienced a steady rise in beef prices in 2015 (Filippov et al., 2016).

Crop product prices in agriculture were growing three times more intensively in 2015 than in 2014 (Ministry of Economic Development of the Russian Federation, 2016). But these price hikes are due to an orientation toward exporting the sector's core products (wheat and barley) – so, consequently, their prices depend, in large measure, on foreign exchange volatility and world price levels. On the whole, this

kind of dynamics of growth in agriculture producer prices is due to the level of competition in the internal market declining, as a result of a drop in food imports, and equipment, including the various spare parts and components used in the production of food products, having a large “import component”, which gets reflected, amid a devaluing ruble, in the costs of production. In addition, the current upward dynamics of the prices for food products, especially crop products, may be regarded as artificial due to a shift in popular demand from expensive to cheap products, which takes place in consequence of the downward trend in median household income.

However, amid hikes in agriproduct prices, the same period also saw a rise in the prices for power, combustive and lubricating materials, mineral fertilizers, and crop protection agents. Based on data from Rosstat, the indexes of prices for industrial goods and services for agriculture were characterized by the following average indicators: combustive and lubricating materials – 103.7%, chemical crop protection agents – 117%, animal feed – 121%, and power – 109.9%. That being said, the rise in the prices for energy resources is mainly due to the state’s policy of pursuing the evening up of world prices with domestic ones, despite the damage to the interests of domestic agricultural producers. It is also worth noting that the way machinery is used in agriculture is different from the way it is done in industry. The means of production in industry, normally, rest in a fixed position, while, say, in crop farming machinery like tractors and combines will have to be driven around. This explains why agriculture generally requires more fuel than most of the sectors of industry. And it is no wonder that issues related to the provision of fuel-and-power resources are always brought up at the government level long before the start of spring planting and harvesting activities.

Providing agrarian enterprises on time and in full with high-tech means of production is a crucial condition for achieving boosts in the efficiency of agricultural activity. Currently, one of the key factors behind the shortage of agricultural transportation vehicles in the agro-industrial complex, with a major portion of the current fleet (nearly 70%) showing a significant degree of wear and one-third of it being used well beyond the design life, is the price disparity between agriculture and the domain of the agro-industrial complex concerned with the manufacture of agricultural machinery (Kuznetsova & Il’ina, 2016, p. 31). From the time the crisis phenomena began in 2014, there was a 10% increase in the prices for vehicles, combines,

Table 2
Statistics on the Manufacture of Tractors and Combines in the
Russian Federation from 2013 to 2015, units

<i>Machinery</i>	2013	2014	2015	2015 to 2013, %
Agricultural tractors	7,641	6,450	5,207	68.1
RF-designed grain combine harvesters	6,008	5,643	4,570	76.1
RF-designed forage combine harvesters	642	530	617	96.1

and equipment intended for use in agriculture. Also, the index for road haulage for 2015 was characterized by the indicator 111.5%. Furthermore, the low competitiveness of certain products from the nation's agricultural machinery industry resulted in the manufacture of combine harvesters and tractors declining by 17.5% and 23.8% respectively in 2015 relative to the previous year (Ministry of Economic Development of the Russian Federation, 2016) (Table 2).

Currently, the agricultural machinery industry is characterized by indirect imports (imports of just spare parts and components as opposed to whole units) prevailing over direct ones. To be specific, imports of agricultural machinery in 2014 declined in 2014 more than two times relative to 2008. That being said, the issue of significant hikes in the costs of production and prices of agriculture, associated with the ruble's volatility relative to foreign currencies, remains topical today as well. Such conditions preclude conducting the necessary upgrade of basic assets, not to mention cultivating the innovation-technological component, carrying out investment projects, fostering financial sustainability at enterprises, and expanding agricultural production.

As was already noted above, declines in the profitability of producing most types of agricultural output are associated with the worsening of price disparity, one of the causes of which is the fast increase in the prime cost of agricultural produce relative to the price it is sold at. In Russia, this, for instance, is the case with grain crop production and crop farming. Data from Rosstat indicate that during the period 2014–2015 the prices for the means of the production of the major grain crops (wheat and barley) grew faster than agricultural producer prices. To be specific, growth in the prices paid for the means of production for growing wheat and barley topped that in the agricultural prices charged for these crops by an average of 11.5%. As far as the prices for crop farming produce, the ratio of the index of prices received to the index of prices paid was 70% (Ministry of Economic Development of the Russian Federation, 2016).

Along with this, it is worth taking into account that price disparity can take an even greater toll on animal husbandry, which is known to be impacted by the concerted effect of crop farming (through animal feed), direct-labor productivity, and the conditions for keeping farm animals. Therefore, it is only when, through prices received, the profitability of animal husbandry reaches 25–30% that we can speak of the lucrativeness and investment attractiveness of the animal husbandry and feed production sectors. Consequently, price disparity may be regarded as a means of extracting the entire surplus product, and part of the necessary product, from agriculture. When profitability is low, and, moreover, when production is loss-making, it becomes hard to implement the latest achievements of science and engineering, which may cause worries over the prospects for the successful development of the agricultural sector.

Throughout the post-Soviet period, due to the then-existing price disparity, domestic agricultural producers constantly had trouble providing themselves with mineral fertilizers. It goes without saying that is on the level of and specific areas for

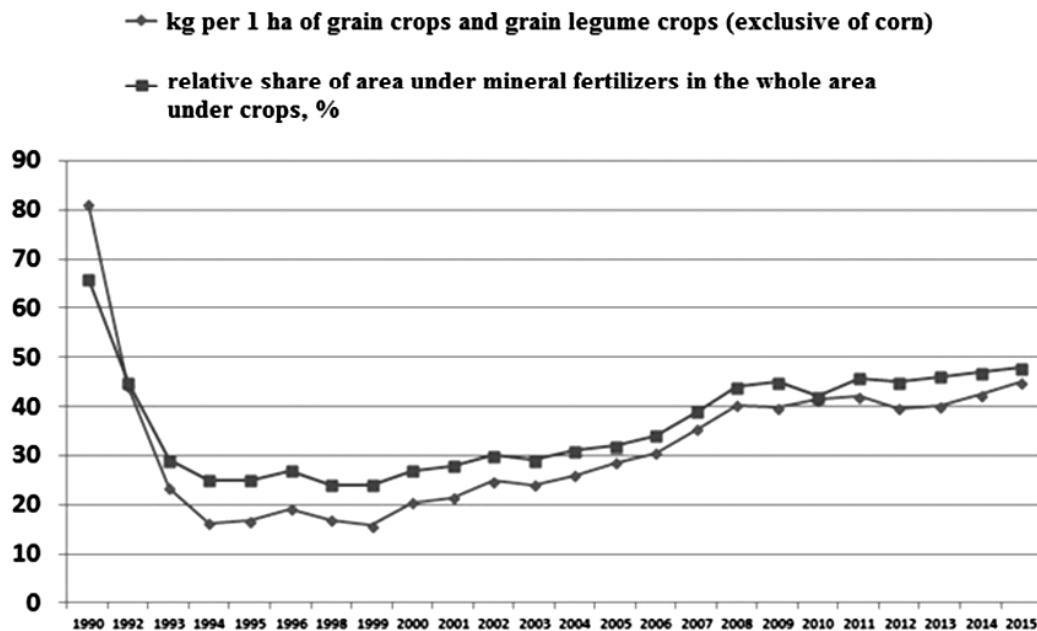


Figure 1: Mineral fertilizer application in RF agriculture.

the development of the segment of the chemical industry concerned with the production of mineral fertilizers that the state of agriculture, and, consequently, the success of the effort to saturate the food market with domestic products and ensure the nation's food security, will largely depend on. As a side note, in 2015 the share of mineral fertilizers in the chemical industry's total output was over 60% (Ministry of Economic Development of the Russian Federation, 2016). Attractive world prices for mineral fertilizers stimulate exports of significant amounts (85%) of this product of the chemical industry, which substantially reduces the chances of meeting internal demand for it, leaving as much as half of the nation's total planted acreage in need of mineral fertilizers. Statistically, the average productivity of one hectare of cropland in Russia is 2.7 times less than in the US, while energy intensity is 4 times that in the US, which is due to climatic differences (Sargina, 2014, p. 114). The nation's low indicators of mineral fertilizer application per hectare of cropland, currently as low as those posted by most African nations, and continual fertilizer price hikes (26.2% in 2015), associated with rising gas and industrial output prices, affect soil fertility restoration efforts and hinder creating the right conditions for the growth and development of the agricultural sector (Ministry of Economic Development of the Russian Federation, 2016) (Figure 1).

It may be possible to achieve a relative parity between the prices for agricultural and industrial output, in the authors' view, through loans extended to agriculture at an acceptable interest rate, most of the world's top economies currently having it at

just 3%. Right now, factors like seasonality, considerable financial dependence on loan capital, and the use of badly worn-out or outmoded plant and equipment give us every right to consider the agro-industrial complex as a lowly profitable, risky area to invest in. The systemic risk posed by the financial sector can badly affect real production and hit the national economy as a whole (Ezdina & Mudrova, 2016). However, among the major special features of lending to agriculture, in comparison with its other forms, the authors find it relevant to point up its social orientation, as it is this lending assistance that the well-being of a significant portion of the national population will ultimately depend on, and the need to provide agricultural loans on more concessionary terms than are typically offered to other sectors, which elevates the need to keep strict record of it and make assessments of the effectiveness of the use of budgetary and non-budgetary resources expended for the purpose.

Amid the implementation of import-substitution policy, the current situation in Russia's agro-industrial complex has made agriculture a priority sector of the national economy, which has elevated the role played by the government in supporting agricultural producers, mainly through subsidizing loan interest rates.

The type of the lending system, the size of the interest rate, and whether short-term loans are provided in a timely manner (considering the seasonal nature of agricultural production) are the key factors for the effective use of the resource potential of participants in the agro-industrial market. According to analytical data, 2015 recorded a 9% increase on the previous year in the combined volume of credit resources extended to enterprises and organizations within the nation's agro-industrial complex, which makes it possible to view agricultural lending as one of the catalysts in boosts in the profitability of agricultural enterprises – 22% (with government subsidies factored in) versus 10.6% (with no subsidies included). To cover part of the interest rate on investment loans, the government allocated from the federal budget the following amounts to agricultural producers by way of subsidy in 2015: crop farming – 14.9 billion rubles; animal husbandry – 27.9 billion rubles. It is worth noting that borrowers managed to obtain short-term loans with subsidies factored in at 4% to 7% per annum and investment loans at 5% to 8% (Ministry of Agriculture of the Russian Federation, 2016). In addition, agriculture was the only sector to register a decline in the share of foreign currency loans compared with all other sectors – from 7.8% to 6.9% (Central Bank of the Russian Federation, 2016).

It is certain that presently the government's subsidizing of agricultural production, coupled with Russia's embargo on food imports from Western Europe and North America and benign weather conditions, is helping the nation's agro-industrial complex to be one of the few sectors demonstrating declines in the debt load and boosts in profitability. That said, despite government support for the domestic agricultural sector, enterprises within the agro-industrial complex still find it hard to meet their loan obligations to banks. To be specific, within a year's time the sector's total overdue debt on foreign-currency loans rose to 19.3% from 6.2% starting in mid-2014. The threefold increase in the indicator led to a situation where one in 10 loans within the

agro-industrial complex was bad (Afanas'eva & Panasyuk, 2015, p. 101). Despite the debt-to-operating-profit ratio being down at year-end 2015 from 5.2% to 4.2%, agribusinesses have yet to break the upward debt trend within this sector of the economy (Central Bank of the Russian Federation, 2016).

Sadly, amid the agro-industrial complex posting a 77–23 ratio of long-term to investment credit resources, inflationary processes, and hikes in the cost of material-technical and credit resources, which have become less accessible due, above all, to the drastic dynamics of the key interest rate set by the Bank of Russia (a rise from 10.5% to 17%), 2016 has so far seen an overall decline in investment activity within the nation's agrarian sector, which is likely to result in the agro-industrial production growth rate slowing down, with the positive dynamics persisting (Ministry of Agriculture of the Russian Federation, 2016). What is more, in undergoing transformation, Russia's agro-industrial complex has found itself in a sort of institutional trap, as a consequence of the immaturity of its formal agrarian institutes. More specifically, subsidies allocated to producers end up being "siphoned off" into regional budgets, with most of the funds then obtained by large agro-holdings and just a fraction of them reaching small businesses. The latter, in turn, end up having to make use of these, pretty scarce, funds – and do so not to improve their business but to pay down their debt load (Maksimova & Bondarenko, 2016; Maksimova & Milyaev, 2016).

4. CONCLUSION

Russia's gradual shift to the innovation development of its economy, including agriculture as one of its major structural elements, requires a major effort by the government aimed at working out and implementing a new economic policy. This strategic program is expected to help ensure the right conditions for modernizing production and implementing the latest technology and work out an effective mechanism for regulating the proportions of the development of the reproduction process, one that would help make ownership relations and industrial, financial, pricing, and trade policies a part of it (Amirova, 2014). The government is expected to face up to the problem of the price scissors for industrial and agricultural products, as well as that of excessive fiscal loads. Modernizing the sector implies ensuring the optimum level of its profitability.

The authors' analysis is indicative of Russia's continuing trend of disparity between the price of agricultural output and that of resources needed to produce it. The low earning power of agriculture and the limited efficiency of the agrarian production, the slow and insufficient, compared with industry, implementation of the latest achievements of scientific-technical progress, the nation's traditionally high dependence on imported spare parts and components for agricultural machinery and raw materials for agricultural producers, and the credit debt burden are the major factors hindering the consistent intensification of production and, consequently, the adoption of an innovation strategy that would help ensure consistent food security for the nation.

References

- Afanas'eva, M. A., and Panasyuk, Ya. M. (2015), Problemy kreditovaniya sel'skogo khozyaistva v sovremenny khusloviyakh [Issues in lending to agriculture under present-day conditions]. *Vestnik Altaiskoi Nauki*, 3: 99–103.
- Amirova, N. R. (2014), Vosproizvodstvennyi protsesssel'skogo khozyaistva [The reproduction process in agriculture]. *Science and Practice*, 2: 62–67.
- Central Bank of the Russian Federation (2016), Godovoiotchet Banka Rossiiza 2015 god [The 2015 annual report of the Bank of Russia]. Date Views: 31.10.2016 https://www.cbr.ru/publ/God/ar_2015.pdf
- Ezdina, N. P., and Mudrova, S. V. (2016), Prichiny vozniknoveniya sistemnykh riskov v finansovom sektore [Causes of systemic risks in the financial sector]. *TsITISE*, 3: 6.
- Filippov, V. S, Kuznetsov, V. V., Vashchekina, I. V., Komarova, A. V., Amirova, N. R., Sargina, L. V., and Arestova, E. N. (2016), Rezul'taty operativnogo monitoringa sotsial'no-ekonomicheskogo razvitiya Rossiisub'ektov RF. Analiticheskii otchet (4 kvartal 2015 goda) [Results of real-time monitoring of the social-economic development of Russia and the constituents of the Russian Federation. An analytical report (as of the 4th quarter of 2015)]. Date Views: 31.10.2016 http://reu-monitoring.ru/data/analytic/ser/analytic-ser_2015-17.pdf
- Kuznetsova, N. A., and Il'ina, A. V. (2016), Sovershenstvovanie mekhanizma ekonomii cheskoimotivatsii sel'khoz tovaroproizvoditelei v usloviyakh ekonomicheskikh sanktsii [Enhancing the mechanism underlying the economic motivation of agricultural producers under conditions of economic sanctions]. *Bulletin of the Saratov State Socio-Economic University*, 2: 29–33.
- Maksimova, T. P., and Bondarenko, N. E. (2016), Voprosyrazvitiya otraslevykh klasterov: Otteorii k praktike [Issues related to the development of sectoral clusters: From theory to practice]. *Interactive Science*, 6: 114–119.
- Maksimova, T. P., and Milyaev, K. V. (2016), Institutional features of cluster development in the Russian Federation. *International Review of Management and Marketing*, 6(6S): 104–111.
- Merzlikin, A. S. (2010), Tsenovaya politika, effektivnost' khimizatsiii sel'skokhozyaistvenno go proizvodstva v Rossii [Pricing policy in and the effectiveness of chemicalization and agricultural production in Russia]. *Problems of Agricultural Chemistry and Ecology*, 1: 45–54.
- Ministry of Agriculture of the Russian Federation. (2016), Natsional'ny idoklad o bitogakh raboty v APK za 2015 god [The 2015 national report on agro-industrial complex performance indicators]. Date Views: 31.10.2016 <http://mcx.ru/news/news/show/50734.355.htm>
- Ministry of Economic Development of the Russian Federation. (2016), Ob itogakh sotsial'no-ekonomicheskogo razvitiya Rossiiskoi Federatsii v 2015 godu [On the outcomes of social-economic development in the Russian Federation in 2015]. Date Views: 31.10.2016 https://docviewer.yandex.ru/?url=http%3A%2F%2Feconomy.gov.ru%2Fwps%2Fwcm%2Fconnect%2Fbfeda678-29cd-44ae-b07b-d3c6d7200d32%2F%25D0%2598%25D1%2582%25D0%25BE%25D0%25B3%25D0%25B8_2015.pdf%3FMOD%3DAJPERES&name=%D0%98%D1%82%D0%BE%D0%B3%D0%B8_2015.pdf

Sargina, L. V. (2014), Aktualizatsiya ekonomicheskikh vozzrenii I. T. Pososhkova v sovremennykh usloviyakh [The actualization of I.T. Pososhkov's economic beliefs under present-day conditions]. *International Trade and Trade Policy*, 6: 107–115.