

VERTICALLY INTEGRATED HOLDINGS IN THE SYSTEM OF DEVELOPING THE NATIONAL COMPLEX OF IRON AND STEEL INDUSTRY OF RUSSIA

Received – Primljeno: 2017-01-25

Accepted – Prihvaćeno: 2017-05-10

Review Paper – Pregledni rad

This article shows brief results of analyzing the competitiveness of Russian vertically integrated holdings and independent enterprises of the iron and steel industry. Besides, it indicates key areas of this industry development in the external and internal market aspect. The promotion of Russian iron and steel products on the external market can be successful only if the production of enterprises is refocused from creating products of low technological conversions to creating products of high technological conversions.

Key words: iron and steel industry, holding, technological conversion, market, Russia

INTRODUCTION

The iron and steel industry is one of the leading industries that is strategically important for the Russian economy (along with the production of the hydrocarbon raw materials). One of the reasons for this is that this industry is provided by the national raw materials base [1, 2]. However, it is necessary to note that as compared to the Soviet period (before the beginning of the 1990s), the observed dynamics of developing the Russian iron and steel industry cannot be acknowledged sufficiently important and successful in terms of positions on the global markets. One of the key problems is insufficient competitiveness stipulated, among other reasons, by a high concentration of vertically integrated holding structures (19 key holdings). About 70 % of the whole volume of the Russian market of the iron and steel industry account for them [3]. Taking into account that in the future the demand for the mill and iron and steel products of high conversions will only increase, it is reasonable to consider the level of competitiveness of Russian holding structures and independent enterprises on the market of iron and steel industry, as well as to define basic areas of developing this industry for the long-term perspective.

REFERENCES AND METHODOLOGY

This article uses two basic approaches to measuring the competitiveness of economic entities. The first approach is based on the multiplication of the operating efficiency index (as a relation of the level of profitability in the *i*-enterprise to the average indicator in the industry or an aggregate of enterprises), and a strategic positioning index (as a square root from the relation of the share of income of the *i*-enterprise to the average value in the in-

dustry or an aggregate of enterprises) [1]. The second approach lies in the fact that the most successful enterprise is the enterprise that shows the highest level of labor efficiency in relation to its competitors [4, 5]. On the basis of data related to the global and Russia iron and steel industry [6 - 10], a comparative analysis of vertically integrated holding structures and independent enterprises of the iron and steel industry by using the first and the second approaches was carried out.

RESULTS

The Asian region has been a leader in iron and steel production during the latest two decades. It produces about 70 % of the global volume of steel and iron. The share of the European Union is not more than 10% of the global market of steel products and iron. Herewith, this was only in the second part of the XX century when the volumes of rolled stock had increased 4,5 times, and during the period since 2000 to 2015 inclusively it almost doubled. Herewith, the whole European Union produces about 160 mln. tons of rolled stock and 93 - 95 mln. tons of iron. Not less than 30 - 40 % of the production are consumed internally [6].

If we consider the iron and steel products that form the global export on the market, it is possible to note that over the recent five years the structure of the iron and steel products export has undergone serious changes. In 2010 above 60 % of the global export was covered by products of mainly low conversions (in particular, ingots and semi-finished products, zinked sheets, steel pipes). However, as early as in 2015 the ratio of products of mainly high conversions (hot-rolled rods, rolled wire, drawn wires, coated sheets, other rods and hot-rolled sheets) already provided about 42 % of the global export (Figure 1).

At the present time (as on 2016) Russia, being one of the leading countries with a well-developed iron and steel industry, provides not more than 5 % of the total global volume of steel eliquation, but as for products of

V. D. Sekerin, S.V. Bank, A.E. Gorohova, Moscow Polytechnic University, Moscow, Russia

M. N. Dudin, Russian Presidential Academy of National Economy and Public Administration, Moscow, Russia

Y. G. Lesnykh, Kuban State Agrarian University, Krasnodar, Russia

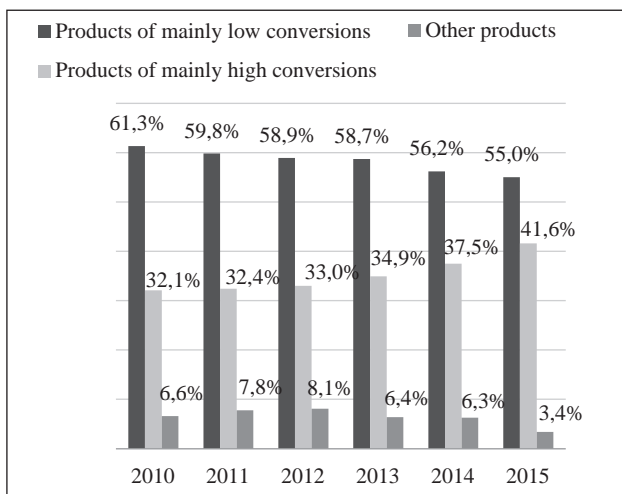


Figure 1 Structure of the world export of products of the iron and steel industry, in % as to the total volume [6]

high conversions it almost does not show considerable results [7]. Herewith, the Soviet Union accounted for about 21 % of the products supply on the global iron and steel market [2, 3, 8]. In 2016 in Russia 19 integrated holding structures operated on the national iron and steel market. They formed more than 70 % of the total volume of the iron and steel production of low and high conversions [2, 3, 7, 8].

If we calculate the competitiveness of vertically integrated holding structures and separate enterprises that operate on the Russian iron and steel market, it is possible to note that these are holding structures that are the most successful (Figure 2).

However, on the other hand, if we use another comparative approach to estimating competitiveness that is based on calculating the labor efficiency, it is possible to note that here independent enterprises will be the most competitive, because at these enterprises the labor efficiency is higher by 15 – 18 % than the analogous indicator calculated on average according to the aggregate of holding structures (Figure 3).

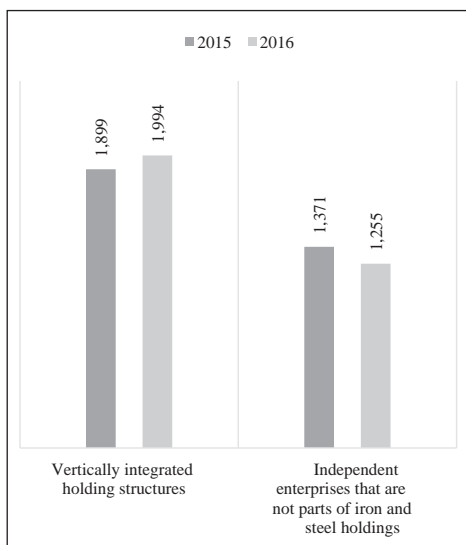


Figure 2 Dynamics of the coefficient of competitiveness of Russian iron and steel holdings and independent enterprises [calculated by the authors on the basis of references [6-10]]

Obviously, independent iron and steel enterprises have a higher level of labor efficiency. However, herewith, they cannot efficiently compete with integrated holding structures because they have a smaller competitive potential and a limited access to the material and technical base and administrative resource. It is forecasted for the nearest decade that the demand for iron and steel products will increase (both in the national and global terms). That is why issues related to providing competitiveness of enterprises and the iron and steel industry in general are rather urgent in terms of the growing demand.

RECOMMENDATIONS

The Russian iron and steel industry has a task to activate the production and business activity in the context of satisfying both the internal and external demands. In the context of increasing volumes of selling products on the internal market, it is necessary to specify the following:

- Firstly, here the basic perspective of increasing volumes of sales is related mainly to the ready products that enterprises of adjacent areas are ready to buy,
- Secondly, it goes logically from the previous thesis that the ratio of the consumer demand for iron and steel products of a low level of processing will decrease because the demand of iron and steel enterprises themselves for it has remained almost on the same level during last few years, and
- Thirdly, taking into account the demand for the ready products, in the future the internal market of iron and steel industry can be considered as a market of products of high conversions, i.e. products with a high value added, it must be inclusively supported by the innovational activity of iron and steel enterprises.

At the same time it is necessary to understand that decisions on improving the competitiveness of iron and

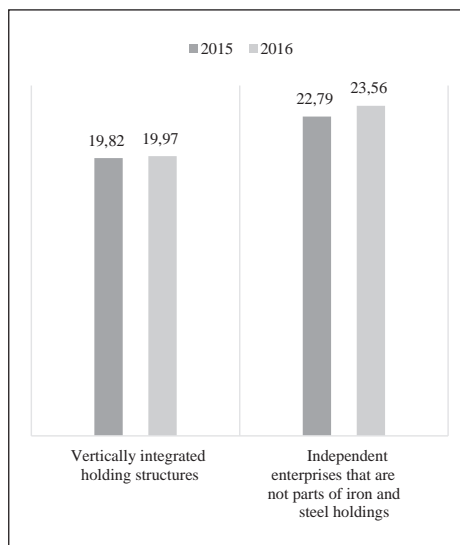


Figure 3 Dynamics of labor efficiency in Russian iron and steel holdings and independent enterprises (mln. RUB/pers., per year) [calculated by the authors on the basis of references [6-10]]

steel enterprises on the internal market must be systematic. In particular, the use of the approach focused only on decreasing expenses and improving the price competitiveness will allow to obtain positive effects as early as in the near future. However, such approach cannot be spread in the long-term perspective because stable development of the industry as a whole, and separate enterprises of the iron and steel industry is possible only under sufficient innovational activity. Highly technological developments must provide innovative solutions in the following areas:

- Optimization of the material resource intensity and increase in intellectual component of the production,
- Decrease in the level of energy ratio of raw materials and iron and steel production, as well as increase in the energy efficiency of the industry enterprises activity,
- Providing environmental compatibility of iron and steel production,
- Using recycling to reduce the volumes of extracting raw materials from deposits,
- Creating new product offers: highly pure metals, new types of alloys, new materials, etc., and
- Creation and widespread implementation of management and organizational innovations.

Russian metallurgical products with a high value added are supplied to external markets by using fall-back strategies. However, in this case the most promising in the long-term perspective is an alternative strategy. Its essence is in the fact that Russian enterprises of the iron and steel industry do not sell products of high conversions via intermediary structures but conclude direct contracts with end consumers. On the one hand this strategy is cost-based in terms of transaction expenses. However, on the other hand, the development in this area provides for stable sale and development of the external economic interfirm cooperation.

CONCLUSIONS

Thus, the basic areas of developing the iron and steel industry and improving the competitiveness of its enterprises are related to innovations that require an increased amount of investments. Besides, there is the need in system decisions on decreasing non-productive resource intensity of iron and steel productions, modernizing interfirm cooperation, creating the research and production clusters and other analogous decisions of the strategic nature. Herewith, it is necessary to take into account the risk component of competitiveness and first of all on external markets, because the internal market is highly focused and does not contribute to the occurrence of new enterprises in the industry.

The existing risks of the activity on the external market are stipulated as well by the fact that the leading importers of the Russian iron and steel products (these are first of all Turkey, China, India, Brazil, and some countries of the Latin America) started actively investing in creating their own iron and steel productions on the background of the growth of global prices for iron and steel products [2, 11]. It means that the Russian iron and steel export to these countries will decrease. Such situation

can also cause the competitiveness aggravation on the global market of ferrous metals, because newly founded enterprises in the above countries will develop not only internal but also external areas of activity.

However, on the other hand, such world regions as the South-Eastern Asia, Middle East and Africa are interested in the import of the Russian iron and steel products because they do not have sufficient amounts of raw materials base to produce them. This is a limiting factor of developing their internal market [1, 2, 11]. It is expected that these regions will maintain a high demand for Russian iron and steel products, and, first of all, products of high conversions. That is why it is necessary to forecast with definite certainty that the import of Russian iron and steel products will increase in these regions in the middle- and long-term perspective.

REFERENCES

- [1] I.V. Ryabov, Institutional factors of economic development in the steel industry in the Russian Federation. *Economy: yesterday, today, tomorrow*, 7-8 (2013), 59-71.
- [2] V. Shatokha, Post-Soviet issues and sustainability of iron and steel industry in Eastern Europe. *Mineral Processing and Extractive Metallurgy*, 03 (2016), 1-8.
- [3] E.V. Protopopov, & S.V. Feyler, Analysis of current state and prospects of steel production development. *IOP Science*, 2015. Available at: iopscience.iop.org/article/10.1088/1757-899X/150/1/012001/pdf. (Accessed date: 27.10.2016)
- [4] M.N. Dudin, E.E. Frolova, N.V. Gryzunova & E.B. Shuvalova, The triple helix model as a mechanism for partnership between the state, business, and the scientific-educational community in the area of organizing national innovation development. *Asian Social Science*, 1 (2015) 1, 230-238.
- [5] M.N. Dudin, N.V. Lyasnikov, V.D. Sekerin, M.Y. Veselovsky & V.G. Aleksakhina, The problem of forecasting and modelling of the innovative development of social economic systems and structures. *Life Science Journal*, 11 (2014) 8, 549-552.
- [6] World steel in figures 2016. World Steel Association. Available at: www.worldsteel.org/publications/bookshop/product-details (Accessed date: 27.10.2016)
- [7] Review of the market of steel and iron industry (September 2016). Researches of Deloitte Group. Available at: www2.deloitte.com/Deloitte/ru/manufacturing/russian/ru-iron-and-steel-industry-report-ru.pdf (Accessed date: 26.12.2016)
- [8] News of metals market. *Metaltorg.ru* Informational portal. Available at: www.metaltorg.ru/news/market_index.php (Accessed date: 26.12.2016)
- [9] External trading of the Russian Federation according to goods. Federal Service of State Statistics. Available at: www.customs.ru/index.php?option=com_newsfts&view=category&id=52&Itemid=1978 (Accessed date: 26.12.2016)
- [10] Industrial production. Federal Service of State Statistics. Available at: www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/enterprise/industrial (Accessed date: 26.12.2016)
- [11] C. Popescu, & G.C. Mursa, Correlations between metallurgical, machinery and construction sectors during the latest economic cycle. *metallurgy*, 55 (2016) 2, 241-244.

Note: The responsible translator for the English language is Elena Serdyukova, Moscow, Russia