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ANALYSIS OF THE INTERNATIONAL COMPETITIVENESS OF DOMESTIC METALLURGICAL ENTERPRISES

Introduction. The relevance of the research topic is determined by the globalization trends of economic development, the growing competitive activity of enterprises, the increase in competitive tension in world markets, the formation of specific forms of competition.

The purpose of the paper is to determine and structure the factors of international competitiveness of domestic metallurgical enterprises at the mega-, macro-, meso- and micro-levels, to identify the most priority positions for winning and maintaining the market.

Results. Based on the analysis of the dynamics of metal products production during 2021-2023, the current state of operation of the largest metallurgical enterprises, the dynamics of foreign investments in the metallurgical industry of Ukraine, the main reasons for the deterioration of the competitive positions of the domestic MMC on the international market of metal products are determined. The negative and positive factors that determine the international competitiveness of MMC of Ukraine at the mega-, macro-, meso- and micro-levels are analyzed. The result of the analysis is the conclusion regarding the absolute predominance of the influence of external factors in the conditions of full-scale military aggression of the Russian Federation, the significant dependence of the development of MMC of Ukraine on the state of world markets. And vice versa, domestic metallurgy has an inverse effect on the global production of metal products, because it has significant resource, production and scientific potential. Considering the specifics of metallurgical enterprises, the state of the world economy and globalization processes, the factors of competitiveness of metallurgical enterprises are structured according to the degree of susceptibility to changes in the conditions of globalization (flexible, difficult to change) and according to the degree of influence on the level of global competitiveness (moderate influence, significant impact).

Conclusions. The analysis of the factors of international competitiveness of the domestic metallurgy showed that in the conditions of its sharp decline, the priority for the industry is not to lose its own competitive advantages, including through the search and effective use of positive factors of international competitiveness. At the same time, the basis of increasing the international competitiveness of the metallurgical industry is to increase the competitiveness of domestic metallurgical enterprises both on the domestic and international markets. It has been proven that when developing a strategy for increasing international competitiveness, it is appropriate to determine the result of focusing on the factors of a more intensive manifestation of the classification feature, that is, on flexible factors of significant influence.

Keywords: international competitiveness of the enterprise (country, region, industry), factors of international competitiveness, metallurgical industry, metallurgical enterprise

INTRODUCTION

Modern globalization trends of economic development are characterized by growing competitive activity of enterprises, increasing competitive tension in world markets, formation of specific forms of competition. The stable position of the enterprise in foreign markets, the level of its investment attractiveness for strategic partners and the degree of consumer loyalty are largely determined by the level of competitiveness of the country (region, industry) as a guarantor of the creation of attractive conditions for business activity and capital investment. According to M. Porter's theory of competitive advantages, the international competitiveness of an enterprise can be assessed within groups of enterprises belonging to the same industry [1]. I.e., according to M. Porter, the international competitiveness of an enterprise is an absolute advantage in relation to other firms, the ability of a subject of market relations to be on the same level in the market as there are similar competing subjects. Given the fact that enterprises of the metallurgical industry are the material basis of the economy of Ukraine,

ensuring their competitiveness on global markets is an important task today. The competitiveness of the metallurgical complex acquires great importance, since it depends on the improvement of the efficiency of the country's economy in general, based on the introduction of new production technologies and the comprehensive use of human capital, aimed at the constant renewal of iron-containing products produced, a significant increase in its quality.

The **PURPOSE** of the paper is to determine and structure the factors of international competitiveness of domestic metallurgical enterprises at the mega-, macro-, meso- and micro-levels, to identify the most priority positions for winning and maintaining the market.

RESEARCH METHODS

The methods of the system approach were used in the process of determining the essence of international competitiveness as a multi-level category, comparative analysis and statistical methods – to analyze the level and potential of the international competitiveness of domestic metallurgy, research of factors influencing the international competi-

tiveness of enterprises.

RESULTS

Metallurgy is a basic branch of Ukrainian industry, which not only meets the country's needs in ferrous and non-ferrous metals, but also acts as one of the main suppliers of currency, selling products for export.

Enterprises of MMC of Ukraine supply the world market: iron ore raw materials, including concentrate, pellets and lump ore, ferroalloys, cast iron, semi-finished products (square blanks, slabs, pipe blanks), finished rolled products, including hot-rolled and cold-rolled products in coils and sheets, as well as profiled products in the form of rounds, of square, rectangular and hexagonal varieties, rails, reinforcing steel and wire rod, as well as products of further processing – steel pipes, metal products, rolled products with coatings, etc [2].

The presence of crisis processes in the development of domestic metallurgy is evidenced by a significant reduction in production volumes and a drop in the share of Ukraine in the world production of steel and cast iron from 2.0% in 2013 to 0.3% in 2022 [3; 4]. It is about the period before the beginning of the full-scale Russian invasion.

The main reasons were:

- the aggression of the Russian Federation in 2014 and its consequences in the form of the annexation of Crimea and the armed conflict in the east of Ukraine;
- the coronavirus pandemic, which led to the closure of markets and a drop in consumption;

As a result, according to the results of 2022, in the world ranking, Ukraine dropped out of the top 15 largest steel producers, falling from 14th to 25th place.

Full-scale Russian aggression accelerated this negative

trend. Several leading metallurgical enterprises found themselves in the occupied territory or in the frontline regions, which reduced or even suspended their activities. Accordingly, as the Table 1 shows, this became the reason for the further destruction of the industry's production potential and a decrease in its competitiveness. The crisis state of the industry is also reflected in the financial situation of metallurgical enterprises. Table 2 data reflect the state of operation of the main enterprises of the metallurgical industry of Ukraine as of the beginning of 2023 and reflect the problems of the crisis functioning of the domestic metallurgical industry. Among these:

- Suspension and destruction of assets.
- Lack of working capital due to the suspension of the process of refunding VAT to exporters due to the suspension of the VAT administration system and the Unified Register of Tax Invoices.
- Logistical limitations due to the destruction of railway infrastructure and the destruction of seaports. According to experts, the blockade of Black Sea ports will cost Ukraine 420 million dollars every month in 2023 [3].
- High logistics costs due to transit through EU countries and a sharp increase in tariffs for railway transportation (+141% for ore, coal, coke and +70% for 2022 for ferrous metals) [3] make the products of the domestic MMC uncompetitive on international markets.
- A sharp drop in prices by 34% for iron ore concentrate and by 27% for hot-rolled coil in the last months of 2022 [3], which continued this trend in 2023, against the background of rising costs and logistics, brings the domestic MMC into the deepest crisis since times of independence.

Table 1 – Dynamics of metal products production during 2021-2023 (compiled according to [5])

Production, thousand tons	Years			Growth rate, %	
	2021	2022	2023	2023/2021	2023/2022
cast iron	21165	6391	6003	28,4	93,9
steel	21366	6263	6228	29,2	99,4
rolled metal	19079	5350	5372	28,2	100,4

Table 2 – State of operation of the largest metallurgical enterprises as of January 2023 (based on [6; 7])

Enterprise	Operation status
"Metinvest"	In the mode of hot conservation, have damage
"Zaporizhstal"	
"Zaporizhkoks"	
"Azovstal"	They began to suspend and preserve the plant from February 24, currently significantly damaged, under occupation
"Zaporizhnevetriv"	In the mode of temporary conservation of technological equipment
Avdiivskiy coke chemical plant	In the mode of partial preservation due to shelling
"Kryvorizhstal"	Work has been partially resumed after the suspension, new logistics channels are being searched for
Khartsyzskii pipe plant	
"Dniprospsstal"	
Dnipropetrovsk Metallurgical Plant	Work has been suspended since the beginning of the war, but resumed in early May
Alchevskii metallurgical plant	They worked, but even before the 2022 war, they had significant problems with the shipment of products
Yenakiivski Metallurgical Plant	
Makiivskii metallurgical plant	Operation is temporarily suspended

– Energy restrictions due to the destruction of the energy system. This forces enterprises to work within the allocated quotas for energy consumption, introducing the mode of maximum economy and reducing the loading of units.

– Reduction of internal consumption of metal products. Experts consider the main reasons for this to be the insufficient nomenclature of steel sheets, the wear and tear of fixed assets by more than half, and the crisis state of the Ukrainian economy, respectively, the insufficient development of related industries.

The identified problems have become significant negative factors in the deterioration of the international competitiveness of both the metallurgical industry as a whole and domestic enterprises. Accordingly, this affected the country's international ranking. As of the end of 2021, Uk-

raine ranked 14th in global steel production, and at the end of 2023, it dropped to 23rd place among the world's top 24 leading producers [4]. Regarding cast iron, the international rating of Ukraine during the same period decreased from 10th place to 16th place among the top 17 leading producers in the world [4]. In turn, this significantly worsened the international position of the domestic metallurgical industry as export oriented.

The decrease in the international competitiveness of domestic metallurgy is also evidenced by the decrease in foreign investments in the industry, the dynamics of which are shown in the Table. 3. It can be seen that during 2022, compared to 2021, the reduction in the inflow of foreign investments in the metallurgical industry amounted to 3419.5 %.

Table 3 – Dynamics of foreign investments in the metallurgical industry of Ukraine (based on [8])

Year		2017	2018	2019	2020	2021	2022
Volumes of investments		3 692	4 455	5 860	-868	6 687	190
Balance	million US dollars	-118	+763	+1 405	-6 728	+7 555	-6 497
	%	-3,2	+17,1	+24,0	-775,1	+113,0	-3419,5

Fig. 1 systematizes the negative factors that reduce the international competitiveness of MMC of Ukraine. The result of their analysis is a conclusion regarding the absolute predominance of external factors in conditions of full-scale military aggression. Other things being equal, it was the domestic metallurgy that first overcame the negative consequences of the market transformation, reorienting its production from domestic to foreign demand. The dynamics of metallurgical production during almost the entire pre-war period was ensured by the favorable situation of the world market of metal products.

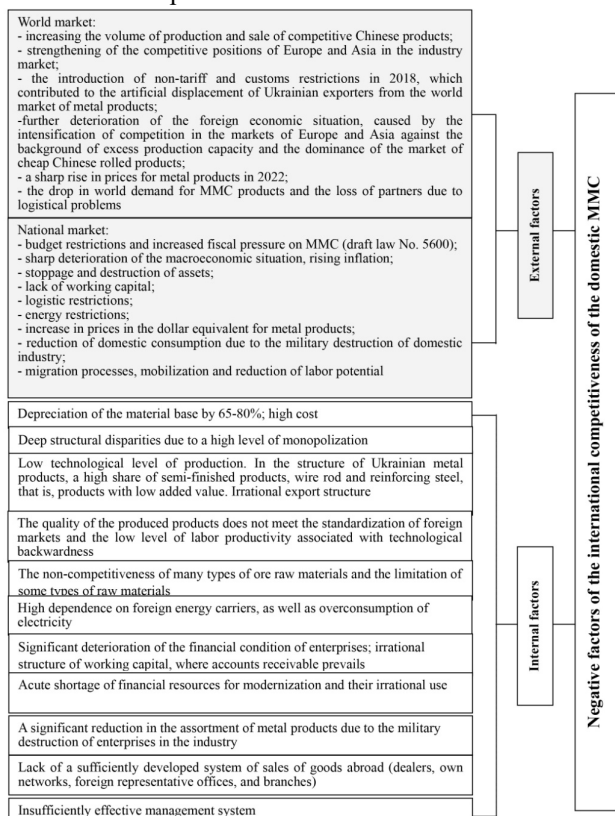


Fig. 1 Negative factors of international competitiveness of MMC of Ukraine (based on [3; 4])

In Fig. 2 main positive factors of international competitiveness of domestic metallurgy are systematized. Their analysis also confirms the significant dependence of the development of MMC of Ukraine on the state of world markets. And vice versa, domestic metallurgy has an inverse effect on the global production of metal products, because it has significant resource, production, and scientific potential.

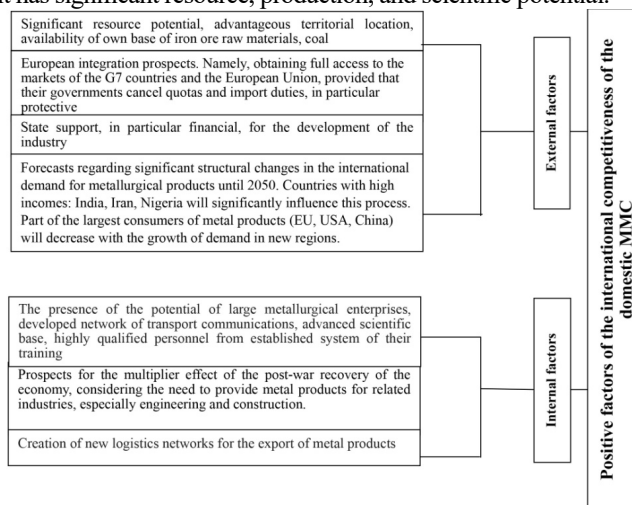


Fig. 2 Positive factors of international competitiveness of MMC of Ukraine (based on [3])

It allows the annual production of up to 35 million tons of cast iron, up to 35 million tons of rolled steel, up to 40 million tons of steel, and up to 6-7 million tons of pipes, pipe profiles and hollow steel fittings [9]. Considering the specifics of metallurgical enterprises, the state of the world economy and globalization processes, experts suggest, along with the existing ones, to classify the factors of competitiveness of metallurgical enterprises: according to the degree of susceptibility to changes in the conditions of globalization (flexible, difficult to change); by the degree of influence on the level of global competitiveness (moderate influence, significant influence) [10]. Fig. 3 shows the vectors of increase in manifestation of the characteristic according to the classification criteria.

		According to the degree of changes in the conditions of globalization	
		Flexible factors	Hard to change factors
By the degree of influence on the level of global competitiveness	Factors of significant influence	<ul style="list-style-type: none"> - Product quality - The price of products on global markets - Global economic connections (suppliers, consumers, traders, other market players) - Resource and energy intensity of production - The level of technologies used at the enterprise - The possibility of attracting loan funds - System and methods of enterprise management - State of production facilities - The level of innovative activity of the enterprise - Long-term planning of the enterprise 	<ul style="list-style-type: none"> - Availability of raw materials - The presence and activity of intra- and inter-industry competitors (for example, producers of plastics and aluminum alloys, which in certain cases are substitutes for ferrous metallurgy products) - Presence of market barriers - Legislative framework and state control
	Factors of moderate influence	<ul style="list-style-type: none"> - Flexibility of production processes - Assortment - State of related industries and markets (for example, construction, mechanical engineering) - Personnel qualification - Compliance of the standards and level of certification at the enterprise with global requirements - Nature protection and general environmental measures 	<ul style="list-style-type: none"> - Dependence on natural monopolies (railway, ports, energy, gas and water suppliers)

Fig. 3 Classification of factors of international competitiveness of enterprises of the metallurgical industry, considering the specifics of modern globalization processes (compiled based on [10, p. 159;11])

The factor "Quality of production" has the highest level of intensity of manifestation of the characteristic according to both classification criteria, and the factor "Dependence on natural monopolies" is the lowest. Accordingly, when

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developing a strategy for increasing the international competitiveness of the metallurgical industry, it is appropriate to determine the result of focusing on factors with a more intensive manifestation of the classification feature, that is, on flexible factors of significant influence.

CONCLUSIONS

The analysis of the factors of international competitiveness of the domestic metallurgy showed that, in the conditions of its sharp decline, the primary task for the industry is not to lose its own competitive advantages, including through the search and effective use of positive factors of international competitiveness. Among the 10 drivers of the post-war recovery of the domestic economy, the metallurgical industry, which has \$26 billion of investment potential, takes an honorable 5th place [8]. The country has experience in high-tech metallurgical processes and a full cycle of titanium and titanium-containing products. It can maintain a niche in the world market of direct reduction iron and "green" metallurgy.

Accordingly, increasing the international competitiveness of the industry should become a key task of the Ukrainian government. At the same time, the basis of increasing the international competitiveness of the metallurgical industry is to increase the competitiveness of domestic metallurgical enterprises both on the domestic and international markets.

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АНАЛІЗ МІЖНАРОДНОЇ КОНКУРЕНТОСПРОМОЖНОСТІ ВІТЧИЗНЯНИХ МЕТАЛУРГІЙНИХ ПІДПРИЄМСТВ

Вступ. Актуальність теми дослідження зумовлена глобалізаційними тенденціями економічного розвитку, зростаючою конкурентною активністю підприємств, збільшенням конкурентного напруження на світових ринках, формуванням специфічних форм конкурентної боротьби.

Метою роботи є визначення та структурування факторів міжнародної конкурентоспроможності вітчизняних металургійних підприємств на мега-, макро-, мезо- та мікрорівнях, виявлення найбільш пріоритетних для завоювання та утримання позицій на ринку.

Результати. На основі аналізу, динаміки виробництва металопродукції упродовж 2021-2023 рр, сучасного стану роботи найбільших металургійних підприємств, динаміки іноземних інвестицій в металургійну галузь України визначені основні причини погіршення конкурентних позицій вітчизняного ГМК на міжнародному ринку металопродукції. Проаналізовані негативні та позитивні фактори, що визначають міжнародну конкурентоспроможність ГМК України на мега-, макро-, мезо- та мікрорівнях. Результатом аналізу стає висновок щодо абсолютного переважання в умовах повномасштабної військової агресії РФ дії зовнішніх чинників, значну залежність розвитку ГМК України від кон'юнктури світових ринків. І навпаки, вітчизняна металургія обернено впливає на світове виробництво металопродукції, бо має значний ресурсний, виробничий та науковий потенціал. Враховуючи специфіку металургійних підприємств, стан світової економіки і глобалізаційні процеси, фактори конкурентоспроможності металургійних підприємств структуровані за ступенем схильності до змін в умовах глобалізації (гнучкі, важко змінні) та за ступенем впливу на рівень глобальної конкурентоспроможності (помірного впливу, значущого впливу).

Висновки. Аналіз факторів міжнародної конкурентоспроможності вітчизняної металургії показав, що в умовах її різкого падіння перед галуззю першочерговою постає задача не втратити власні конкурентні переваги, в тому числі за рахунок пошуку та ефективного використання позитивних факторів міжнародної конкурентоспроможності. Водночас основою підвищення міжнародної конкурентоспроможності металургійної галузі є підвищення конкурентоспроможності вітчизняних металургійних підприємств як на внутрішньому, так і на міжнародних ринках. Доведено, що при розробці стратегії підвищення міжнародної конкурентоспроможності доцільно визначити результат фокусування на факторах більш інтенсивного прояву класифікаційної ознаки, тобто на гнучких факторах значущого впливу.

Ключові слова: міжнародна конкурентоспроможність підприємства (країни, регіону, галузі), фактори міжнародної конкурентоспроможності, металургійна галузь, металургійне підприємство