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Assessing export competitiveness in the context of growth in emerging economies. The example of Ukraine

Abstract

The purpose of this article is to clarify the content of the concept of "competitiveness", to develop and test approaches to assess the importance of basic, price and non-price competitiveness of commodity exports to ensure its dynamics on the example of Ukraine. *Methodology*. The article proposes to expand the content of the concept of "competitiveness" by generalizing the level of compliance of goods (services) with consumer preferences of market participants. This conceptual position is used to enhance the understanding of basic, non-price and price competitiveness of products and to clarify methods for its evaluation. The *results* of testing the methodology and technique showed that the cyclical process of alternating growth of non-price or price competitiveness of Ukrainian export products is mainly interrupted. The reason for this is the high price competitiveness of raw material exports, which is achieved mainly at the expense of low wages in the economy. On international markets, non-price competitiveness is inherent in a relatively small number of commodity groups of Ukrainian products. These include: insulated wires, cables and other insulated electrical conductors; fiber optic cables; turbojet engines, turboprops and other gas turbines; electric heating appliances and devices; parts of aircraft. *Practical implications*. It has been substantiated that in terms of finding a new economic growth strategy for Ukraine, the most relevant issues are not the intensification of export activities, but the renewal of the composition of the largest export commodity groups. The leading positions among them should be taken by goods with a large share of added value, increased technological complexity and non-price competitiveness. *Value/originality*. The beginning of this process will mean the emergence of new qualitative changes in the economy, as well as the effectiveness of the state policy of economic reforms.

Keywords

Export, import, consumer preferences, competitiveness, unit value, export strategy, developing economies, economic growth

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1 Introduction

With the exception of 2017, the average annual growth of world GDP in 2014–2019 reached and exceeded the growth of world merchandise exports (WTO, 2020). This new market situation has shown that merchandise exports have lost their ability to significantly influence global output growth. This has led some economists to believe that exports should be seen as a diagnostic tool, and that export support policies should be seen as one of the levers in a broader strategy to increase the competitiveness and growth of economies.

This formulation of the question has actualized a number of theoretical and applied problems that scientists have to solve. The most difficult of them is related to the development of state policy measures to improve the competitiveness of the economy. However, of no less scientific importance are the questions connected with the assessment of the level of competitiveness of exports, its characteristic as a "facade" of the economy, a "showcase" of its possibilities. The latter is confirmed by empirical evidence showing that exporting companies are 8-12% more productive than those supplying domestic markets (De Loecker, 2004).

The issue of increasing the level of competitiveness of export products is relevant to all developing economies that take advantage of globalization to change their structure in favor of more technological industries and ensure high growth rates. The search for solutions to this problem should begin with an analysis of changes in the basic (general), price, and non-price competitiveness of export goods. In particular, an increase in the level of their basic competitiveness testifies to the strengthening of the

influence of commodity exports on the country's economic growth. However, if one gathers facts about the increased price competitiveness of exports, they can be seen as evidence of the economy's continued incentives to maintain the existing export structure, which is dominated by raw materials and semi-finished products. If facts of increase of non-price competitiveness of exports (which is often called cost or quality competitiveness) are found, they can be an evidence of formation in the economy of incentives to change its structure in favor of technologically more complex goods with innovative or more qualitative properties.

At the same time, the current arsenal of scientific knowledge does not allow to gather the necessary factual evidence. This is partly due to the existence of unresolved methodological issues. The main issues are what competitiveness is, and which concept is fundamental among those that characterize competitiveness at the level of enterprises, industries, regions, and economies (countries). Questions about the method of research also remain unclear. "How to assess the level of basic, non-price and price competitiveness of goods?", is the key question. The purpose of this article is to clarify the content of the concept of "competitiveness", to identify the main among the related concepts that this term contains, to develop and test approaches to assess the role of basic, price and non-price competitiveness of commodity exports to ensure its dynamics on the example of Ukraine.

2 Competitiveness research methodology

"Competitiveness" is a widely used economic concept that has no unambiguous, generally accepted interpretation. It is used to describe phenomena in a market economy related to competition for consumers. It does not make sense to use this concept to analyze monopolized markets or areas of circulation in planned and centralized economies. A detailed analysis of the history of theoretical development of the concept of "competitiveness" was carried out by the English scientist R. Martin (Martin, 2003); Austrian scientists K. Aiginger, S. Berentaler-Sieber, and J. Vogel (Aiginger, Bärenthaler-Sieber, Vogel, 2013); American scientists M. Delgado, K. Ketels, M. Porter, and S. Stern, and Polish scientists T. Syudek, and A. Zavoyska.

Based on the achievements of these and other scholars, it can be argued that over the past fifty years the content of "competitiveness" has often been explained in general terms such as the *ability, potential, probable future opportunities* of firms and countries to successfully market goods and services in a competitive market environment. M. Delgado, K. Ketels, M. Porter, and S. Stern aptly observed that such definitions are imperfect and in need of clarification. In particular, they stressed that the modern understanding of competitiveness is related to what underlies wealth creation and economic performance (Delgado et al., 2012).

The implicit, hidden nature of what lies at the heart of wealth has led scientists to seek ways of describing more accurately the content of the concept of "competitiveness" on the basis of quantitative assessments of the properties (characteristics) of the real phenomenon it generalizes. "How to evaluate such characteristics as "abilities", "potential", and "capabilities", which reflect not the essence but the incidental nature of competitiveness?", a new problem emerged. This follows from the fact that in real life, for example, potentials or opportunities either may or may not be realized.

To get out of this impasse, economists used the following theoretical assumption. If competitiveness is a random phenomenon, then it can be studied, on the one hand, by the set of conditions that precede it and form its properties, and on the other hand, by the results of the impact of these properties on other economic phenomena. This approach proved to be very effective because it opened the way to describing competitiveness based on evaluations of its factors and characteristics.

The specifics and factors of competitiveness have been the subject of numerous studies. However, all of them were based on a somewhat paradoxical situation. Its essence was that the features and factors are events that can be quantified and described, while competitiveness itself is not. This situation raised the question of revising the meaning of the concept of "competitiveness". Thus, scientists T. Siudek, and A. Zawojska proposed to consider it as a purely evaluative concept, like "GDP" or "employment", meaning a set of characteristics of one object relative to the characteristics of a comparable (benchmark) object in the market (Siudek, Zawojska, 2014). Such an interpretation of competitiveness is universal, and it can be used to explain all modern applied research in this field. However, this notion of competitiveness has lost its economic meaning and turned into a set of indicators.

Different understandings of competitiveness, its characteristics and factors increasingly confuse the issue of developing appropriate policies. Difficulties in policymaking are likely to persist until economists begin to view competitiveness as a *natural* rather than an accidental phenomenon. This paper believes that enough evidence has already been accumulated in science to change the view of this phenomenon. The most important among them is the following: the main criterion of a random phenomenon is not the unpredictability of its occurrence, but the combination of factors that cause it. According to this assumption, a random phenomenon is caused each time by a new combination of factors that will never be repeated in the future. If scientists describe and specify a set of constant factors that cause a particular

economic phenomenon (including competitiveness), it means that the phenomenon is inherently deterministic and occurs logically under the action of certain forces.

Realizing that competitiveness is a natural phenomenon, the problem of a more precise definition of the content of its generalizing concept inevitably arises. The search for its solution should begin with an analysis of the hierarchy in the system of concepts containing the term "competitiveness". It is advisable to recognize as fundamental among them the concept that is used to characterize goods and services. The argument in favor of this approach is simple. It is impossible to prove or imagine that there can be competitive firms, industries, regions, or countries that do not produce competitive goods or services.

However, this approach to describing the hierarchy of concepts containing the term "competitiveness" causes a misunderstanding of what makes goods and services competitive. At first glance, everything is simple, it is the special unique properties of goods and their availability. In this context, it should be noted that a large number of affordable products with new properties are produced worldwide every year. However, only a few of them become sales leaders in the markets and generate large revenues for companies and countries. The above-mentioned fact can be used as an argument in favor of the conclusion that only the consumer's priority to buy a product makes it competitive. Thus, the concept of "competitiveness" should be generalized to nothing more than the conformity of a good (service) to the consumer preferences of market participants.

It can be assumed that the compliance of goods (services) to consumer preferences of market participants can have both minimum and maximum values, which vary, for example, in the range of 1-100%. At the same time, the accumulated empirical evidence suggests that the compliance of goods (services) with consumer preferences of buyers can reach the maximum possible values only if all the available micro-, meso- and macro-economic factors of competitiveness are activated in the economy. Therefore, applied research should use the concept of "basic competitiveness. It is expedient to use it to describe in the economy the compliance of goods (services) with consumer preferences of market participants maximized with the help of micro-, meso- and macro-economic factors.

The proposed conceptual treatment of the concept of "basic competitiveness" makes it possible to find methods of direct assessment of the generalized phenomenon. In particular, in economics, the maximum compliance of a good (service) with consumer preferences of buyers can be accurately described by a quantitative assessment of its share in the total volume of market sales of goods of similar purpose. The peculiarity of this indicator is that it contains information that the purchase of a particular good (service) is perceived as a priority for consumers, who generate a separate part of the market demand.

The concept of "basic competitiveness" is composite. Its content consists of two constituent elements. One of them is summarized in the concept of "price competitiveness", which characterizes the level of conformity of the price of goods (services) to the purchasing power of market participants. The second element is described by the concept of "non-price competitiveness". It reflects the level of conformity of the properties of goods (services) to the subjective perceptions and expectations of market participants about the usefulness of their use or consumption.

Entrepreneurs are constantly trying to create new products with high non-price competitiveness. However, they begin to earn a significantly increased additional income only when the non-price competitiveness of a new product (service) is supplemented by its price competitiveness. This pattern is the engine of long-term economic growth. Reliable empirical evidence that non-price and price competitiveness of goods are equivalent factors of export growth was collected by French scientists R. Cesar and F. Cartelier (Cezar, Cartellier, 2019).

3 Method for determining the price and non-price competitiveness of exports

The proposed methodological justifications suggest that the levels of non-price and price competitiveness of products are constantly changing. It follows that in some periods of time the dynamics of exports are determined by their high non-price competitiveness, and in others by their high price competitiveness. Proving the existence of this theoretical construct in the form of an economic regularity is in question. For this purpose, first of all, it is necessary to develop a methodology that makes it possible to identify the dominant role of non-price or price competitiveness of export goods in ensuring the dynamics of their sales.

The author believes that such a method can be developed on the basis of the unit cost index (UV). This index measures the change in the average value of units that are not homogeneous and can be affected by fluctuations in both the assortment of goods and their prices. In this study, the average unit cost of a country's exports (imports) is estimated in USD per kilogram weight of a set of goods of a certain group j or set of product groups t. The cost of 1 kilogram of weight is described by the indices UVix and UVim, which reflect the unit cost of exports and imports of commodity groups of country i. Some analytical possibilities of these indices can be presented as follows:

First, the UV*ixj* (UV*imj*) can be used to compare the specific value of export (import) groups *j*1 and *j*2, the products of which do not compete with each other in the market. In this case, the indicator UV*ixj*1 / UV*ixj*2 (UV*imj*1 / UV*imj*2) will reflect the relative level of technological complexity of commodity groups. This situation can be explained as follows. For example, iron ore is not a subject of competition in the automobile market and vice versa. It follows that the ratio between the unit cost of iron ore and automobiles is an estimate of the relative level of their technological complexity. The UV*ixt* (UV*imt*) index can be used to compare the unit value of the entire set of product groups *t* of country *i*1 with that of country *i*2. In this case, the indicator UV*i*1*xt* / UV*i*2*xt* (UV*i*1*mt* / UV*i*2*mt*) will reflect the relative level of technological complexity of commodity exports (imports) of these countries.

Second, the index UV*ixj* (UV*imj*) can be used to compare the unit value of export (import) groups *j*1 and *j*2, products of which compete with each other in the market. In this case, the indicator UV*ixj*1 / UV*ixj*2 (UV*imj*1 / UV*imj*2) will reflect the relative level of non-price competitiveness of the specified product groups.

Third, the UV*ixj* and UV*imj* indices can be used to compare the unit value of a set of export and import goods that belong to the same product group *j*. In this case, the exports and imports of goods of group *j* should be considered as such that *indirectly compete* with each other in the market. This position can be explained as follows. In a market economy, national goods, regardless of the geographical structure of sales in foreign or domestic markets, have similar properties. In the domestic market, one part of these goods directly competes with imported goods, and another part competes with exported goods. This suggests that exports conventionally compete with imported counterparts.

If the indicator UV*ixj* / UV*imj* >1, it means that the unit of export commodity group *j* of country *i* has a higher average price in foreign markets than its imported counterparts in the domestic market, and vice versa, if UV*ixj* / UV*imj* <1. However, the indicator UV*ixj* / UV*imj* does not have an unambiguous interpretation. This is due to the fact that, for example, higher prices for exported (imported) products may indicate both higher production costs and their higher non-price competitiveness. In some cases, the unambiguous interpretation of UV*ixj* / UV*imj* is possible due to the information contained in the ratio of exports and imports of goods of group *j* (X*ij* / M*ij*). This methodological provision has the following explanation. The excess of exports over imports (X*ij* / M*ij* >1) is possible only under two conditions (greater non-price competitiveness or greater price competitiveness of domestic products).

Based on the indicators X*ij* / M*ij* and UV*ixj* / UV*imj* and approaches to the interpretation of their combinations, as well as theoretical and empirical achievements in this field by K. Aiginger (OECD, 1998), O. Kostoska, P. Mitrevsky, M. Angeleska, G. Mancheska (Kostoska et al., 2012), in this paper attempts to describe and formalize a set of attributes that allow us to identify the dominant influence of non-price or price competitiveness of export goods on their sales. In particular:

a) an indication that the high non-price competitiveness of a group of goods has had a dominant influence on their export is a market situation in which: exports of this group of goods exceed imports of analogues, the average unit cost of the exported set of these goods is higher than the imported one. Formally, this feature can be represented as follows:

X*ij* / M*ij* >1; UV*ixj* / UV*imj* >1,

where X*ij*, M*ij* are exports, imports of goods of group *j* of country *i*; UV*ixt*, are the unit value of exports, imports of goods of group *j* of country *i*;

b) an indication that the low non-price competitiveness of a group of goods has had a dominant influence on their export is a situation in the economy in which: imports of this group of goods exceed exports of analogues (due to their obsolescence, non-compliance with consumer preferences or consumer indifference to low prices); the specific value of the exported set of these goods is lower than the imported. Formally, this function can be represented as follows:

X*ij* / M*ij* <1; UV*ixj* / UV*imj* <1;

c) an indication that the high price competitiveness of goods has had a dominant influence on their export is a market situation in which: exports of this group of goods exceed imports of analogues; the specific value of the exported set of these goods is less than the imported set. This characteristic can be represented as follows:

X*ij* / M*ij* >1; UV*ixj* / UV*imj* <1;

d) an indication that the low price competitiveness of goods has had a dominant influence on their export is a market situation in which: imports of this group of goods exceed exports of their analogues; the specific value of the exported set of these goods is greater than the imported set. This feature can be represented as follows:

X*ij* / M*ij* <1; UV*ixj* / UV*imj* >1.

4 The results of an empirical study of the competitiveness of Ukrainian exports

The level of basic competitiveness of Ukraine's export goods can be determined by assessing their

share in world merchandise exports. In 2013-2019, Ukraine's share in world merchandise exports decreased from 0.34% to 0.27%. This fact indicates a decrease in the basic competitiveness of Ukrainian exported goods on the world market compared to the pre-crisis year of 2013 (World Bank, 2020; State Statistics Service of Ukraine, 2020). At the same time, this data also indicates that since 2017, the basic competitiveness of exports has tended to increase.

This trend necessarily affects the reason for the increase in the share of Ukrainian goods in worl d exports (the dominant influence of non-price competitiveness or the influence of price competitiveness). The search for an answer to this issue should begin with an analysis of changes in the unit cost of products that Ukraine imported and exported in 2013–2020. To do this, use data that reflect changes in the dynamics of the unit value of products that Ukraine imported and exported during the period (United Nations, 2020).

The data show that between 2013 and 2019, the cost per kilogram weight of the entire set of goods that Ukraine exported and imported decreased. In particular, the value of the unit of total merchandise exports (UV*ixt*) decreased from $0.36 to $0.30/kg. For comparison, it should be noted that in developed countries this indicator is about $7.5/kg (Kostoska et al., 2012). Ukraine's significant underperformance by this indicator is evidence of the low technological complexity of this country's exports.

At the same time, the unit value of total merchandise imports (UV) decreased from 1.02 to 0.80 USD/kg. This meant that the Ukrainian consumer further reduced requirements to the properties of imported products, and Ukrainian businesses did not try to import modern, expensive technological equipment to modernize their own enterprises. Despite this, in 2013–2019 the average specific value of total merchandise imports to Ukraine was more than 2.6 times higher than the value of merchandise exports. This indicates that the latter had a lower technological complexity compared to imports.

At first glance, these data can also be used to identify the dominant role of non-price or price competitiveness of commodity exports in ensuring the dynamics of the latter. To do this, it is enough to analyze what were the average annual values of X*it* / M*it* and UV*ixt* / UV*imt* in 2016–2019 and interpret them in accordance with the above method of identifying the impact of non-price (price) competitiveness of exported products on the dynamics of its sales. If one follows this, it can be found that during this period, the annual average value of X*it* / M*it* was 0.87, and UV*ixt* / UV*imt* was 0.4, that is, these two indicators were less than unity. Formally, they can be summarized as follows: X*it* / M*it* <1; UV*ixt* / UV*imt* <1. Based on them, we can assume that these figures are a sign of low non-price competitiveness of Ukrainian commodity exports, their obsolescence and inconsistency with consumer preferences of foreign market participants, as well as the emergence of indifference to low prices.

However, the assumption that low non-price competitiveness is inherent in the whole set of exported goods is somewhat contradictory. The facts suggest otherwise. In particular, in 2017–2019, Ukrainian commodity exports had a positive trend ranging from 126.3% to 106.3% annual growth. Certainly, such trend could not arise under the influence of low non-price competitiveness of Ukrainian exports. This means that it is necessary to find another, more accurate method of assessing the level of non-price (price) competitiveness of the country's total merchandise exports.

According to the author, the level of non-price (price) competitiveness of the country's total merchandise exports should be determined not at the macro-economic level, but at the sectoral level. This is due to the fact that at the macro-level, the indicator X*it* / M*it* can change under the influence of not only the output and export of domestic products, but also a number of other factors. The main among such factors are the country's external borrowing and debt, the exchange rate, foreign investment, remittances from migrant workers abroad, etc.

The calculation error resulting from these factors can be reduced as follows. In particular, the crucial role of non-price (price) competitiveness of goods in ensuring their aggregate export should be identified by means of average values of X*ij* / M*ij* and UV*ixj* / UV*imj*, calculated for all or the largest commodity groups, whose share in the structure of exports exceeds 50%. This approach can be argued as follows. The factors determining the value of the index X*it* / M*it* at the macro-level cannot simultaneously and proportionally change the index X*ij* / M*ij* at all industry markets. This means that the average value of the latter will more accurately reflect the situation in foreign trade.

Try to check the above provisions on the example of the 10 largest export groups of Ukraine, whose share in the total volume of merchandise exports in 2019 was 51.52% (United Nations, 2020). According to the three-digit codes of the Standard International Trade Classifier SITC (0-9) in Ukraine, the 10 largest export product groups included the following: sunflower, safflower or cotton oil (code 421), corn (044), wheat (041), semi-finished carbon steel products (672), iron ores and concentrates (281), flat-rolled carbon steel products (673), soybeans (222), ferroalloys (671), cake, solid waste from the extraction of vegetable fats and oils (081). In these product groups, the average value of indicators was: X*ij* / M*ij* – 5101.9; UV*ixj* / UV*imj* – 0,55. These

indicators can be formalized as follows: X*ij* / M*ij* >1; UV*ixj* / UV*imj* <1. Their combination indicates a high level of price competitiveness of Ukraine's nine largest export groups.

And only in one of the top 10 export commodity groups was the combination of indices slightly different. This is a group the products of which are usually included in those of higher technological complexity, namely: insulated wires, cables and other insulated electrical conductors; fiber optic cables (code 773). In this product group, the value of indicators was: X*ij* / M*ij* – 2.56; UV*ixj* / UV*imj* – 2,12. These indicators can be expressed in the following way: X*ij* / M*ij* > 1; UV*ixj* / UV*imj* > 1. Their combination indicates a high level of non-price competitiveness of this group of goods. Of course, other types of Ukrainian products were also characterized by high non-price competitiveness. However, it should be noted that, unfortunately, they were few, and their share in Ukraine's commodity exports was insignificant.

The fact that the high level of price competitiveness was the main reason for the expansion of Ukrainian commodity exports in 2017–2019, naturally raises the question: what factors made this possible? Analysis of the relative size of the average monthly wage shows that it was a powerful lever for reducing production costs and maintaining exclusively price competitiveness of Ukrainian products. This is evidenced by the comparison of hourly labor costs in the EU and Ukraine. Specifically, according to Eurostat, the average hourly labor cost in the EU-27 in 2019 was 27.7 euros. The highest it was in Norway (50.2 euros), Denmark (44.8 euros), Luxembourg (41.9 euros), Iceland (41.2 euros), Belgium (40.5 euros), and the lowest in Lithuania (9.4 euros), Romania (7.7 euros), and Bulgaria (6.0 euros) (Eurostat, 2020). According to calculations, the average hourly labor cost in Ukraine in 2019 was 5.2 euros. This relatively low level served, on the one hand, as a factor in increasing the price competitiveness of Ukrainian export products and, on the other hand, as a lever for pushing the qualified labor force available in Ukraine to labor migration.

5 Conclusions

Considering competitiveness as a phenomenon inherent in all economies that develop in a competitive environment, the following conclusions can be made.

First, high competitiveness can be inherent in countries with both developed and developing economies. However, a comparison of such countries sometimes seems inconclusive because their companies usually do not compete with each other because they sell different types of products on world markets.

Second, one of the factors in the development of economies is the cyclical process of alternating growth of non-price and price competitiveness of national products. As global experience suggests, stopping this process usually occurs in countries that are exporters of raw materials and semi-finished products, for which, due to their rarity and limited stocks, there is usually a high demand and price level.

The possibility of making super-profits from their sale does not encourage businesses to develop other activities related to the processing of available national and imported raw materials into consumer and investment goods. This situation has been described from different angles and received such names as "Dutch disease", "resource curse", "paradox of plenty", "poverty paradox ", and "divergence trap".

Third, Ukraine has interrupted the cycle of alternating growth of non-price and price competitiveness for the overwhelming majority of export products. The reason for this is the high price competitiveness of raw materials and products of low level of processing in foreign markets. This situation creates both additional opportunities and significant constraints on future economic growth. In particular, significant limitations are that Ukraine will not be able to indefinitely increase sales of grain, iron ore, metal, ferroalloys, waste oil and other raw materials on world markets. In addition, the relatively small added value created by their production will continue to condemn the Ukrainian economy to low wages and labor migration.

Fourth, in the context of the search for a new economic growth strategy for Ukraine, the most relevant issues are not the intensification of export activity, but the renewal of the composition of the largest groups of commodity exports. In particular, among them it is advisable to give leading positions to new groups, which, on the one hand, have increased technological complexity and are able to generate more added value, and, on the other hand, are characterized by a sufficiently high non-price competitiveness in international markets.

Fifth, the question that is becoming increasingly relevant today is "do modern Ukrainian reforms increase the opportunities for products with increased non-price competitiveness and technological sophistication to become part of major export groups in the near future?" According to the study's results, that can be argued. The Verkhovna Rada of Ukraine of the IX convocation at the 1st and 2nd sessions (August 2019 – January 2020) adopted 155 laws. However, an analysis of the real facts shows that the current reforms have not yet gained the critical strength that would be sufficient for the development of industries producing products of high technological complexity. While per capita sales of these goods, which are mainly included in the XVI, XVII and XVIII export commodity groups, were $233.6 in Ukraine during 2013, in 2019 it was $131.9.

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