

INSTITUTIONAL CHANGES AND DYNAMICS OF PRODUCT COMPETITIVENESS IN UKRAINE

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Abstract. The purpose of this article is to theoretically clarify the content of the concept of "competitiveness"; to summarize the main results of institutional reforms in Ukraine, to test approaches to a more accurate macroeconomic assessment of the dynamics of competitiveness of major domestic commodity groups and technological complexity of foreign trade. *Methodology.* The article proposes to consider the concept of "competitiveness" as the level of compliance of goods (services) with consumer preferences of market participants. This conceptual position is used to interpret the basic competitiveness of large product groups and determine methods for its evaluation. *The results* of the assessment of the methodology and technique showed that in 2017-2019 the basic competitiveness of Ukrainian exports gradually increased, but in its composition the shares of certain types of raw materials and products of their shallow processing increased. At the same time, the competitiveness of consumer and investment products in the domestic market decreased and was gradually replaced by imported analogues. These trends suggest that Ukraine is selling more raw materials on international markets and producing fewer goods of higher technological sophistication with innovative or higher quality characteristics. Despite this, Ukraine's specialization in the global economy remains economically justified and effective. However, in the long run, this position of Ukraine is socially undesirable, as it holds back the development of the economy and throws it to the margins of technological progress. *Practical implications.* It is substantiated that, despite institutional changes, Ukraine has not approached the goal of increasing the level of competitiveness of products of high technological complexity, which have a relatively large share of added value. *Value/originality.* The study uses the dynamics of macroeconomic competitiveness of large commodity groups as a criterion of the effectiveness of institutional reforms in the country.

Key words: institutional transformations, competitiveness, consumer preferences, market shares, foreign trade by technology complexity, unit value.

JEL Classification: E66, F14, O14

1. Introduction

Since the beginning of the economic crisis of 2014-2015, institutional reforms have accelerated in Ukraine. The strategy of institutional reforms is often declared by officials as aimed at the formation of a competitive economy without bureaucracy and corruption with favorable conditions for business development (fair justice, low taxes, availability of investment guarantees). The first steps in formulating the strategy were taken in 2014-2015, when state agencies reduced the number of taxes, the scale of redistribution of financial resources through the state budget, reduced the number of procedures, time and money spent on registration and creation of new businesses.

In the second half of 2019 and the first half of 2020, these measures were actively supplemented by new measures aimed at revising certain approaches to the taxation of income of employees and certain categories of entrepreneurs, simplifying the conditions for investing in the production of traditional products. At the same time, the main means of improving economic expectations in the economy were: mitigation of inflation, reduction of the discount rate of the National Bank of Ukraine (NBU) in order to reduce the cost of bank loans for businesses.

At the end of 2019 the inflation rate in Ukraine decreased to 4.1%, in the fourth quarter of that year the NBU lowered the discount rate twice, and Ukrainian banks lowered interest rates on loans by 2.4 points –

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to 15.7% per annum. These consequences of institutional changes gave hope that business, having received access to cheaper credit resources, in the nearest future will decide itself: what kind of economic activity is expedient to develop for renewal of production structure, increase of output of new kinds of competitive products of higher technological complexity with innovative and higher quality properties. This direction of economic development was to lead to an acceleration of Ukraine's economic growth, an increase in the standard of living of the population and an end to its labor migration.

It is difficult to gather facts about the level of implementation of this scenario, if we rely on the data of international organizations. For example, in 2013-2014, Ukraine ranked 84th out of 148 countries in the annual Global Competitiveness Index (GCI) compiled by the Geneva-based World Economic Forum (WEF). In 2016, Ukraine began to experience economic growth. According to the Global Competitiveness Index, in 2016-2017 Ukraine ranked 85th out of 138 countries, in 2017-2018 it ranked 81st out of 140 countries, and in 2019 it ranked 85th out of 141 countries. These data reflect changes in Ukraine's competitiveness compared to other countries. At the same time, the question arises, how has the level of competitiveness of the Ukrainian economy changed in 2019 compared to the pre-crisis year of 2013, after which institutional changes accelerated?

This formulation of the question has actualized a number of theoretical and applied problems that scientists have to solve. The most complicated among them are related to the development of state policy measures to improve the competitiveness of the economy. However, issues related to macroeconomic evaluation of the level and dynamics of competitiveness of national products on domestic and foreign markets have acquired no less scientific importance. The purpose of this article is to theoretically clarify the content of the concept of "competitiveness", to summarize the main results of institutional transformations in Ukraine, to test approaches to a more accurate macroeconomic assessment of the dynamics of competitiveness of major domestic product groups and the technological complexity of foreign trade.

2. The search for approaches to the study of competitiveness

"Competitiveness" is a widely used economic concept, which has no unambiguous generally accepted interpretation. Based on the achievements of scientists such as R. Martin (Martin, 2003), K. Aiginger, S. Berenthaler-Sieber, and J. Vogel (Aiginger, Bärenthaler-Sieber, Vogel, 2013), M. Delgado, K. Ketels, M. Porter, and S. Stern (Delgado et al., 2012), and T. Syudek, and A. Zawojska (Siudek, Zawojska, 2014),

it can be argued that over the past fifty years, the contents of "competitiveness" is often explained by such general terms as *ability, potential, probable future opportunities* of firms and countries to successfully sell goods and services under the conditions of market competition. However, the scientists faced the problem of evaluating such characteristics as "capabilities", "potential", "opportunities", which reflect not the essence, but the accidental nature of competitiveness. A way out of this situation was found. Economists began to describe not competitiveness as a phenomenon, but its factors and features.

Analysis of studies has shown that historically the main characteristics of competitiveness of firms and countries were considered: the share of sales of their products in the market, relatively lower local production costs, deficit-free trade balance or current account, GDP per capita. Today, some economists are of the opinion that the ability of a country or region to export more value added than to import should be considered as such a characteristic (Atkinson, 2013), as well as the expected level of production per person of working age (Delgado et al., 2012), that is, the possible productivity of a potential worker.

At the same time, some European scholars call for a rethinking of the traditional characteristics of competitiveness. They propose to include not only the contribution to production (production costs, productivity), but also the results of economic activity, as well as the level of their focus on solving modern problems associated with the transition of countries to socially inclusive and environmentally sustainable growth. According to them, the main of such results is the ability of the country (region, local formations) to achieve for its citizens the goals that go "beyond GDP". The need to use this characteristic to determine competitiveness is justified by the fact that the social system and environmental aspirations of public and private institutions can become a "productive force. The contribution of firms and countries to its development goes beyond the goals of GDP (Aiginger, Bärenthaler-Sieber, Vogel, 2013).

The peculiarities of competitiveness were actively analyzed first at the level of firms, industries and countries, and then – economic regions. This process was combined with the search for and refinement of factors of competitiveness. In this regard, economists have noted that the real issue of competitiveness analysis is not to describe its results, but to identify the factors that explain it (Martin, 2003). Some advances in these areas of research can be summarized as follows.

The basic analysis of the basic signs and factors (sources) of competitiveness of firms was carried out by Indian scientists A. Ambastha and K. Momaya. On the basis of their researches, they came to a conclusion that the signs of competitiveness of firm can be the following results of its activity: increase

in customer satisfaction, productivity, profitability, market share, as well as product range, development of new products, generation of value. According to these scientists, the sources of results can be combinations arising from the combination of tangible and intangible assets available in firms (human resources, technology, production structure, reputation, brands) with the processes of strategic management, operational management, quality, product design, technology improvement and marketing activities (Ambastha, Momaya, 2004).

Macroeconomic competitiveness is quite actively analyzed. In particular, the experts of the World Economic Forum (WEF) proposed a research method for the Global Competitiveness Index, developed to assess the integrated contribution of macroeconomic factors (favorable environment, human capital, markets and innovation ecosystem) to aggregate factor productivity. The latter was considered as the main characteristic of competitiveness, the factors of which were assessed and described using 103 indicators (World Economic Forum, 2019).

In turn, scientists of the International Institute for Management Development (IMD) in the World Competitiveness Yearbook (WCY) suggested that the main characteristic of macroeconomic competitiveness is the presence of a favorable competitive environment for enterprises. The most influential factors of its formation include indicators of the economic environment, state efficiency, business efficiency, and infrastructure. More than 330 criteria were used to assess them (IMD World Competitiveness Center, 2019).

The scientific search for signs and factors of macroeconomic competitiveness has been a matter of debate and is far from over today. Discussions about the features and factors of regional competitiveness are no less contrasting. Generalizing scientific research in this area, R. Martin proposed the concept, according to which the features of the competitiveness of regions with different levels of development can be the facts of their transformation into sites (places) of production, increasing profits or knowledge centers. The most influential factors shaping the first of these types of regions include: production factors (labor, land, capital), the second type – the regional investment climate (infrastructure, human resources and production environment), and the third type – institutions, availability of technology, scientific infrastructure, social capital, demographics, qualitative characteristics of the area and the environment (Martin, 2003). Croatian scholar D. Borozan proposes to consider technological, social, infrastructural and institutional assets as features of regional competitiveness. Among the factors determining the emergence of these features are unique regional characteristics that can be used to create reliable conditions for living and working (Borozan, 2008).

Different understandings of the factors of competitiveness increasingly confuse the issue of shaping appropriate policies. If we consider competitiveness as a random phenomenon that emerges each time under the influence of a new combination of micro-, meso- and macroeconomic factors, it is impossible to determine exactly what their future combination should be, which will not only increase the capabilities, potential and opportunities of economic entities, but will also ensure their guaranteed success in market competition on the market.

Difficulties in policymaking are likely to persist until economists begin to view competitiveness not as a random phenomenon, but as a legitimate one. In our opinion, science has already accumulated enough evidence to change the view of this phenomenon. The most important of them is the following: the main criterion of a random phenomenon is not the unpredictability of its occurrence, but the totality of factors which 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 causing a particular economic phenomenon (including competitiveness), this means that the phenomenon is inherently deterministic and occurs logically under the action of certain forces.

If it is realized that competitiveness is a natural phenomenon, then 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 which the term "competitiveness" contains. 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 which do not produce competitive goods or services. They are the main condition for the competitiveness of all other economic actors.

However, this approach to describing the hierarchy of concepts containing the term "competitiveness" raises the question of understanding what makes goods and services competitive. At first glance, the answer is simple – the special unique properties of the product and its availability. In this context, it should be noted that every year a large number of affordable products with new properties are produced around the world. However, only a few of them become sales leaders in the markets and bring big profits to 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) with the consumer

preferences of market participants. In other words, this approach can be described as follows. In the market any good (service) remains competitive as long as its properties and price are within the limits of consumer preferences of buyers. The proposed conceptual understanding of competitiveness allows us to interpret a common feature of all relevant studies.

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 facts give grounds to assert that conformity of the goods (services) to consumer preferences of buyers can reach the maximum possible values only under condition of activation in economy of all available micro-, meso- and macroeconomic factors of competitiveness. 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 macroeconomic factors.

3. The method for assessing the competitiveness of basic products

The proposed conceptual treatment of the concept "basic competitiveness" allows to find methods of direct estimation of the phenomenon generalized by it. In particular, in economics, the maximum conformity of goods (services) to consumer preferences of buyers can be accurately enough described by a quantitative assessment of its share in the total volume of market sales of products of similar purpose. The analytical possibilities of this indicator are described in economic science (Wilson et al., 2002). Its peculiarity lies in the fact that it contains information that the purchase of a particular good (service) is perceived as a priority by consumers generating a separate part of market demand.

The authors believe that in order to assess the macroeconomic dynamics of the basic competitiveness of a country's goods, it is advisable to use three main indicators and one additional indicator. In particular, to assess the competitiveness of consumer goods in the domestic market, it is advisable to use the indicator "goods of the country in the structure of retail turnover." By analogy, the indicator "goods of the country in the structure of capital investment" can be used to evaluate investment products.

And at the same time to assess the basic competitiveness of export goods we can use the indicator "a country's share in world merchandise exports. In order to understand whether this indicator reflects an increase in the share of raw materials or technologically sophisticated products in the structure of exports, it is advisable to use the unit value index (UV). Although

there are other approaches to assessing the technological sophistication of trade (Broekel, 2019), such as the analysis of international trade flows by technological intensity (Panagiotis, Constantina, Georgiou, 2010). However, for the purposes of our macroeconomic analysis, the UV index looks preferable, as its dynamics can be interpreted more unambiguously and considered as a vector of development of the commodity structure of the country's exports.

The UV index measures the change in the average cost of units that are not homogeneous and can be affected by fluctuations in both the range of goods and their prices. In this study, the average unit value of a country's exports (imports) is estimated in U.S. dollars per kilogram weight of a set of goods of a certain group j or set of commodity groups t . The value of 1 kilogram of weight is described by the indices UV_{ix} and UV_{it} , which reflect the unit value of exports and imports of commodity groups of country i . Some analytical possibilities of these indices can be presented as follows.

The UV_{ixt} and UV_{it} indices can be used to compare the cost of a unit of a set of exports and imports. If the index $UV_{ixt} / UV_{it} > 1$, indicates that the unit of export commodity group t of country i has a higher average price in foreign markets and technological complexity than its imported counterparts in the domestic market, and vice versa, if $UV_{ixt} / UV_{it} < 1$.

4. Main results of the study

Basic competitiveness of investment and consumer goods in the domestic market of Ukraine. Domestic investment goods enter the sphere of production in the form of capital investments. In 2014-2015, Ukraine's capital investment index declined from the previous year, and in 2016-2019, it rose between 115.5 and 121.1%. The latter trend indicates an increase in demand for means of production. In order to meet the demand, entrepreneurs had the opportunity to buy domestic or imported products. Their choice is characterized by the data of Table 1, reflecting the shares of domestic and imported products in the structure of capital investments of Ukraine in 2015-2019.

The data in Table 1 show that in 2015-2019, the share of domestic investment products in the structure of capital investments decreased from 37.6% to 32.2%, while the share of imported products increased from 37.0% to 47.4%. These trends indicate a decrease in the competitiveness of domestic investment goods compared to their imported counterparts.

The dynamics of consumer goods sales can be analyzed with the help of indicators characterizing fluctuations in the shares of domestic and imported products in the structure of retail turnover. For this purpose, we will use the data of Table 2, reflecting the share of domestic products in the structure of retail turnover of Ukraine.

Table 1

Domestic and imported products in the structure of capital investments of Ukraine in 2015-2019

Years	2015	2016	2017	2018	2019
Capital investments, million UAH	273116	359216,1	448462	578726,4	623978,9
Share of imported products, % of capital investments	37,0	46,3	51,0	46,0	47,4
Share of national products, % of capital investments	37,6	32,6	34,0	32,0	32,2

Source: compiled by author based on data for relevant years: (State Statistics Service of Ukraine, 2021)

Table 2

National products in the structure of retail turnover of Ukraine in 2013-2019

Years	2013	2014	2015	2016	2017	2018	2019
Consumer goods in the structure of retail trade, %	57,2	57,8	58,1	55,8	52,3	53,2	52,4
including food products, %	85,5	85,6	85,2	84,8	82,2	81,4	80,0
non-food products, %	39,0	39,5	39,3	35,6	32,6	31,7	32,0

Source: compiled by author based on data for relevant years (State Statistics Service of Ukraine, 2021)

The data in Table 2 show that in the post-crisis period of 2016-2019 in Ukraine in the structure of retail turnover the share of sales of domestic food products decreased from 85.2% to 80.0%, and non-food products – from 39.3% to 32.0%. This means that in the domestic market the level of competitiveness of domestic consumer goods decreased compared to imported counterparts.

The basic competitiveness of Ukrainian exports. Today, economists view exports as a "facade" of the economy, a "showcase" of its possibilities. The latter is confirmed by empirical facts showing that exporting companies are 8-12% more productive than those supplying products to domestic markets (De Loecker, 2004). 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% (World Bank, 2020; State Statistics Service of Ukraine, 2020). At the same time, this data also shows that basic export competitiveness has been trending upward since 2017 compared to 2015-2016.

So, what caused the increase in the share of Ukrainian goods in world exports, namely the increase in sales of raw material or technologically complex products?

The search for an answer to this question should begin with an analysis of the change in the unit value of products that Ukraine imported and exported in 2013-2019. To do this, we will use the data in Table 3.

The data in Table 3 show that in 2013-2019, 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 \$0.30US/kg. For comparison, it should be noted that in developed countries this figure is about 7.5 US dollars/kg (Kostoska et al., 2012). Ukraine's significant lag in this indicator is evidence of the low technological sophistication of this country's exports.

At the same time, the unit value of total merchandise imports (CU) 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 to expand the production of *innovative and higher-quality products*. 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 total merchandise

Table 3

Dynamics of the specific value of exports and imports of Ukraine in 2013-2019

Years	Total merchandise imports			Total merchandise exports		
	Value (Mit), thousand USD	Net weight, ton	Unit value (UV _{imt}), USD/kg	Value (Xit), thousand USD	Net weight, ton	Unit value (UV _{ixt}), USD/kg
2013	76850494	75344171	1.02	63264122	174392468	0.36
2014	52533379	59475536	0.88	54044054	174031481	0.31
2015	36569603	57782723	0.63	38170630	159897001	0.24
2016	38869503	60690174	0.64	36364059	150323936	0.24
2017	49537383	73829551	0.67	43260180	153155757	0.28
2018	56875461	73277660	0.78	47328962	149107552	0.32
2019	60414393	75413733	0.80	50061057	166976286	0.30

Source: compiled by author based on data for relevant years (State Fiscal Service of Ukraine, 2020)

Table 4

Average unit value of the 10 largest export-import commodity groups in selected countries in 2019

Country	The average unit cost of the 10 largest product groups j		UV_{ixj}/UV_{imj} , times
	Export groups j (UV_{ixj}), USD/kg	Import groups j (UV_{imj}), USD/kg	
Russian Federation	0.52	31.75	0.02
Ukraine	2.37	9.94	0.24
Kazakhstan	6.54	9.48	0.69
Spain	8.50	15.34	0.55
Greece	10.67	11.08	0.96
Sweden	27.04	17.66	1.53
France	61.71	82.26	0.75

Note: The average unit cost was calculated only for those product groups that were valued in USD/kg and did not contain rare resources.

Source: compiled by author based on statistics data (United Nations, 2020)

exports. This indicates that the latter had a lower technological complexity compared to imports.

In order to understand how Ukraine compares to other countries in terms of UV_{ixt} / UV_{imt} , the data from Table 4, which provides estimates of the average unit value of export and import commodity groups in the top 10 in individual countries in 2019, is used.

The data in Table 4 show that in 2019, Ukraine's average unit cost of the top 10 export product groups exceeded that of only the Russian Federation, and its import product groups exceeded that of Kazakhstan. In addition, with the exception of Russia, Ukraine differed in that within the top 10 product groups it imported products of much higher technological sophistication than it exported. This is evidenced by the ratio of the average unit cost of the 10 largest export and import product groups, which is less than unity, namely $UV_{ixj} / UV_{imj} = 0.24$. The most pronounced inverse trend was observed in Sweden, which exported much more technological products in the top 10 product groups than it imported ($UV_{ixj} / UV_{imj} = 1.53$).

5. Conclusions

The Verkhovna Rada of Ukraine of the IX convocation at the 1st and 2nd sessions (August 2019 – January 2020) adopted 155 laws. Do modern Ukrainian reforms create opportunities for products with increased competitiveness and technological complexity to become part of the largest commodity groups in the near future? This question is becoming more and more relevant today. The results of the

study prove that in 2017-2019 the competitiveness of Ukrainian exports gradually increased, but in its composition the share of certain types of raw materials and products of their shallow processing increased. At the same time, the competitiveness of consumer and investment goods in the domestic market decreased and was gradually replaced by imported analogues. These trends suggest that Ukraine is selling more raw materials on international markets and producing fewer goods of higher technological sophistication with innovative or higher quality characteristics. Despite this, Ukraine's specialization in the global economy remains economically justified and effective. However, in the long run it is socially undesirable, as it holds back the development of the economy and throws it to the margins of technological progress. It follows that, despite institutional transformations, Ukraine is no closer to realizing the goal of increasing the level of competitiveness of products of increased technological complexity, which have a relatively large share of added value.

Ukraine's economy can get out of this situation only if entrepreneurs begin to actively acquire additional comparative advantages in the production and sale of technologically complex goods. Skilled labor and quality institutions can serve as additional sources of comparative advantage. Considering that qualified workers actively migrate from Ukraine, the state has only one way to bring the economy to a new level of competitiveness – to create a favorable institutional environment for innovative activities of enterprises.

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