

MODERN APPROACHES TO THE DETERMINATION AND CALCULATION OF THE COMPETITIVENESS OF THE NATIONAL ECONOMY

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Abstract. In the context of the globalization of economic relations and the openness of economies, the concept of competitiveness is being maintained or even increased. There are practically no developed countries in the world that would not create special commissions for analyzing the state of competitiveness of their economies and would not look for ways to improve it. After all, a successful strategy for sustainable development depends largely on a reliable assessment of the real situation and the development of new methodological approaches to understand the competitiveness of the economic system and the mechanisms for its management. This article is an attempt to present the most common methods in the world practice for analyzing and calculating the indicator of country competitiveness are presented, such as the methodology of the World Economic Forum and the International Institute for Management Development. However, in addition to this, some alternative approaches are suggested for determining the country ratings in the world classification by such parameters like Doing Business, the Index of Globalization, the The Legatum Prosperity Index of countries, the World Economic Situation and Prospect, and others.

Keywords: *competitiveness, expert assessments, globalization, method of competitiveness, rating, World Competitiveness Yearbook, World Economic Forum*

Introduction

The problem of the country's competitiveness and the search for ways of improvement still remains relevant today. It has been a priority for individual states and associations (like the European Union) for several decades. Developed strategies and tactics, development programs to achieve competitiveness are ultimately evaluated by various criteria and methodologies, often differ and are inconsistent with each other. In addition, existing methods are used equally in relation to countries at different stages of development, with different capacities, resources and history.

Therefore, the main task at this point, in our opinion, would be the development of a specific approach to an individual state or several countries similar in their basic characteristics (dimension, level of development, availability of resources, etc.). Careful analysis of the used criteria and indicators, a detailed study of the methodology of existing approaches, as well as knowledge of the current situation will make achievement of this goal possible.

Methodological part

Today, there are many different organizations and departments both on the level of a single country and internationally involved in researching the statistical indicators of states, analyzing and ranking the competitive advantages of countries at the world level. Among the most famous of them are the following:

Table 1

International ratings of the integrated assessment of countries

Name of organization	Research topic	Scope sampling	The beginning of release, periodicity
Institute of Management (IMD), Switzerland	World Competitiveness Yearbook (WCY IMD)	63 countries (2017)	1989, annually
World Economic Forum (WEF)	Global Competitiveness Report (GCR, WEF)	137 countries (2017)	1989 (together with IMD); after 1996 individ., annually
UN/HDRO	Human Development Index	195 countries (2016)	1991, annually
World Bank	Worldwide Governance Indicators, WGI	229 countries (2016)	1996, annually
World Bank	Doing Business	190 countries (2018)	2002, annually
UNCTAD	International Trade, Investment and Development	All countries (2017)	2002, annually
KOF Swiss Economic Institute	KOF Index of Globalization	209 countries (2018)	2002, annually
UN/DESA, UNCTAD	World Economic Situation and Prospect	All countries (2018)	2006, annually
Analytical Center The Legatum Institute, United Kingdom	The Legatum Prosperity Index	149 countries (2017)	2006, annually
Cornell University, INSEAD, The World Intellectual Property Organization (WIPO)	The Global Innovation Index	127 countries (2017)	2007, annually
Simon Anholt, United Kingdom	The Good Country Index	163 countries (2017)	2010, annually

It is worth mentioning another center of competitiveness studies - the Institute for Strategy and Competitiveness at Harvard University (USA), headed by Professor Michael Porter, who initiated the development of the concept of "competitiveness" in economic science, and wrote in the early 1990s the book "Competitive Advantages of Nations". However, this institution studies primarily competitiveness on a corporate level, which is not the subject of this article, which covers the analysis of the competitiveness ratings of countries and regions.

With all the variety of existing methods, we consider the most well-known and often used.

1. Methodology of the World Economic Forum. A synthetic indicator that determines the competitiveness of individual goods, sectors of the economy or national production in general, and characterizes the position of individual states in the world market, is an indicator of the country's competitiveness, developed by the World Economic Forum (WEF). In the report of the

Presidential Commission of the USA "World Competition. The new reality" competitiveness is determined by the extent to which a nation can produce goods and services that meet the demands and requirements of international markets in a free competition, while maintaining or increasing the incomes of their fellow citizens [9].

To determine the rating of the competitiveness of national economies at the world level, multifactor models are used, in which more than 300 parameters are taken into account. They can be represented in the form of aggregated subsystems that reflect:

- domestic economic potential and economic growth;
- scientific and technical potential;
- established management system, socio-economic and internal political situation;
- scale of state regulation of the economy;
- the state of monetary and financial systems;
- foreign economic relations;
- infrastructure, capacity and dynamism of the domestic market;
- availability and qualitative characteristics of labor resources, participation in the international division of labor.

In the presented model, objective statistical indicators for each country are supplemented by data of a subjective nature - experimental evaluations of analysts, opinion polls of heads of large corporations and leading economic experts.

Based on the objectives of the study, the definition of the competitiveness of a particular country is its ability to achieve sustainable economic growth in the medium term (up to 5 years). At the same time the competitiveness of one country does not mean non-competitiveness of another: only differences in their level are revealed, due to the action of diverse and often multidirectional factors. With this approach, particular importance is attached to the analysis of management methods and the effectiveness of public institutions that contribute to, to some extent, the achievement and maintenance of economic growth.

An important consideration for this method of analyzing competitiveness is the fact that the countries of the world community are at different stages of economic development, they have different "starting conditions" when compared from the standpoint of institutional, structural or other characteristics, while distinguishing 3 basic and 2 transitional stages.

Table 2

Weights of groups of factors of the WEF rating for countries at different levels of development [3]

	Group 1 factor-driven economy	Transitional from group 1 to group 2	Group 2 efficiency- driven economy	Transitional from group 2 to group 3	Group 3 innovation- driven economy
Borders of GDP per capita, \$	<2000	2000–2999	3000–8999	9000–17000	>17000
Basic requirements, %	60	40–60	40	20–40	20
Efficiency enhancers, %	35	35–50	50	50	50
Innovation and sophistication factors, %	5	5–10	10	10–30	30

In the ranking of 2017-2018 the competitiveness of countries was determined by 3 generalized criteria:

- Basic requirements, reflecting the baseline required to ensure the progressive development of the country (institutions, infrastructure, macroeconomics, well-being and primary education);
- Efficiency enhancers in production efficiency and the economies of the country as a whole (the level of development of the system of higher education and training of personnel, the internal commodity market and the level of competition, the labor market and financial market, technical and technological equipment of the entire production and economic complex);
- Innovation and sophistication factors that characterize the possibilities of the innovative way of development of the country and the provision on this basis of a new quality of economic growth (business practices, innovations). For each of these groups, corresponding indices are calculated, which together serve as a basis for calculating the overall competitiveness index GCI (Global Competitiveness Index). The specific weight of each group of factors, as mentioned above, varies and has the following values, presented in Table 2.

2. Methodology of the International Institute for Management Development. The World Economic Forum is not the only organization that promotes the idea of a composite index of competitiveness. In fact, this activity has become very fashionable and widespread in the world economic and business media, which leads to the emergence of an increasing number of such ratings from various institutions.

The most famous along with the rating of the WEF is the World Competitiveness Yearbook, published by the International Institute for Management Development. According to its statement, the "World Yearbook of Competitiveness of the IRM" *is the most detailed and comprehensive in the world annual report on the competitiveness of states [7]*. It has been published since 1989 and is based on an assessment of the environment ensuring the competitiveness of enterprises in all countries. Its difference from the WEF approach is that it proceeds from the position of inability to reduce competitiveness only to changes in GDP and factor productivity. The dynamism and growth of enterprises is also affected by social, cultural and political factors.

Under the competitiveness of the countries, the Institute understands *the ability of the national economy to create and maintain an environment in which competitive business arises [5]*. In order to assess the 63 countries included in the sample, the WCY uses over 340 criteria for four key indicators of equal weight, key aspects of the economic life of the country:

1. State of the economy (economic performance) - 78 indicators;
2. Government efficiency (state management) - 71 indicator;
3. State of the business environment (business efficiency) - 68 indicators;
4. Infrastructure - 114 indicators.

Each factor is divided into 5 subfactors, some of which were divided into subgroups:

Table 3

Factors and subfactors of competitiveness [6]			
Economic Performance	Government efficiency	Business efficiency	Infrastructure
Domestic Economy	Public Finance	Productivity and Efficiency	Basic infrastructure
International trade	Fiscal Policy	Labor market	Technological infrastructure
International investment	Institutional Framework	Finance	Scientific infrastructure
Employment	Business legislation	Management practices	Health and environment
Prices	Social Framework	Attitudies and values	Education

The calculation uses data from international organizations such as the United Nations, the Organization for Economic Cooperation and Development, the World Trade Organization, the

World Bank, the International Monetary Fund and other institutions, as well as 57 partner institutions around the world. The business climate in the countries covered by this study is assessed based on the opinions of analysts, surveys of executives of large corporations and management experts. The final rating is made based on the ratio: two thirds - statistical data, one third - expert estimations.

3. Methodology of the World Bank. The rating directly related to the analysis of the business environment of the state is "Doing Business" - a global study conducted by the World Bank and the International Finance Corporation, based on a combination of analysis of business regulations and generally available statistical data on business regulation. The project has been implemented since 2002 and currently represents the most comprehensive set of business regulation indicators around the world.

The study contains a rating of 190 countries of the world in terms of the index of business support, calculated on the basis of the arithmetic mean of eleven benchmarks having the same value:

1. Starting a business;
2. Dealing with construction permits;
3. Getting electricity;
4. Registering property;
5. Getting credit;
6. Protecting minority investors;
7. Paying taxes;
8. Trading across borders;
9. Enforcing contracts;
10. Resolving insolvency;
11. Labor market regulation.

The project involves more than 7000 experts from different countries across the world - business consultants, lawyers, economists, government representatives, as well as leading scientists from different countries, providing methodological and expert assistance.

The high position of the countries means that its regulatory climate favors business. The calculation does not take into account such factors as macroeconomic policy, infrastructure quality, labor force qualifications, currency fluctuations, investor opinions, security and corruption level. Thus, the conditions for organizing and conducting business are considered, without taking into account political aspects, exclusively at the level of legislative provisions and standards.

4. The Legatum Prosperity Index is a combined indicator of the British think tank The Legatum Institute, which measures the achievements of the countries of the world in terms of their prosperity. The study is conducted since 2006 by the British think tank The Legatum Institute (a division of the international investment group Legatum). The aim of the study is to study public welfare and its development on a global scale.

The index is compiled based on many different indicators, united in nine categories (more than 100 indicators), which reflect different aspects of society and social welfare factors:

1. *The Economic Quality* (openness of the economy, macroeconomic indicators, growth factors, economic opportunities and efficiency of the financial sector);
2. *The business environment* (entrepreneurship, business infrastructure, barriers to innovation and labor market flexibility);
3. *The Governance* (rule of law, management effectiveness, democracy and political participation);
4. *The Education* (accessibility and quality of education, human capital);
5. *The Health* (physical and mental health, health infrastructure, preventive measures);
6. *The Safety and Security* (national and personal security);
7. *The Personal Freedom* (legal rights, individual freedom, social tolerance);
8. *The Social Capital* (the strength of personal relationships, social support in society, social norms and the degree of civic participation in countries);

9. *The Natural Environment* (quality of the environment, impact on the environment, measures for its conservation).

The rating of each country is determined by calculating the weighted average of these indicators, each of which is defined as the basis of prosperity. Indicators are based on statistical analysis, sociological research and expert assessments of survey participants. The statistics used in the rating are obtained from the United Nations, the World Bank, the Organization for Economic Cooperation and Development, the World Trade Organization, Gallup, the Economist Intelligence Unit, IDC, Pyramid Research and other institutions. The editorial board of the Index includes representatives of several leading universities and research centers.

5. KOF Index of Globalization. One of the ratings, not directly related to the competitiveness of the national economy, but determining the opportunities and potential of the country on a global scale, is the "KOF Index of Globalization". It was established in 2002 at the Swiss Economic Institute and is positioned as a combined indicator that allows you to assess the scale of integration of a country in the world of goods and compare different countries for several components.

Due to the fact that the processes of globalization and integration are the main trends of modern society, as well as the degree of globalization's influence on the level of international competition, the further development of new technologies and their spread among countries, and, in addition, national economies, the results of this rating deserve attention.

This index includes four main areas of research [8]:

- 1) Study of political processes;
- 2) Study of economic processes;
- 3) Study of social processes;
- 4) Studying of cultural processes, while each country studied within the framework of the Index is assessed by 24 indicators, grouped into three main groups:

1. Economic globalization (specific gravity - 36%), characterized by flows of goods, capital and services over long distances, as well as information and perceptions accompanying market exchanges;

2. Social globalization (39%), expressed through the dissemination of ideas, information, images and people;

3. Political globalization (25%): characterized by the spread of public policy.

Each variable also has its own specific weight and affects the intermediate and final result:

Table 4

Subindexes and variables included in the KOF Index of Globalization		
Economic globalization	Social globalization	Political globalization
<i>Real flows (50%)</i>	<i>Data on personal contacts (33,3%)</i>	
1. Trade (% of GDP) - 19%	1. International voice traffic - 26%	1. Embassies in countries - 25%
2. Foreign direct investment, flows (% of GDP) - 20%	2. Transfers (% of GDP) - 3%	2. Membership in international organizations - 28%
3. Foreign direct investment, shares (% of GDP) - 24%	3. International tourism- 26%	3. Participation in the missions of the UN Security Council - 22%
4. Portfolio investments (% of GDP) - 19%	4. Migration (% of total population) - 20%	4. International agreements - 25%
	5. International letters (per capita) - 25%	

Table 4 (continuation)

Economic globalization	Social globalization	Political globalization
<i>Restrictions (50%)</i>	<i>Data on information flows (33,3%)</i>	
1. Barriers to imports - 22%	1. Internet users (per 1000 people) - 36%	
2. The average level of tariffs - 28%	2. Television (per 1000 people) - 36%	
3. Taxes on international trade (% of current income) - 27%	3. Trade in newspapers (% of GDP) - 28%	
4. Capital Account Restrictions - 22%	<i>Data on cultural integration (33,3%)</i>	
	1. The number of McDonald's (per capita) - 43%	
	2. Number of IKEA stores (per capita) - 44%	
	3. Trade in books (% of GDP) - 12%	

Data used in the calculation of the economic component are provided by the World Bank, UNCTAD STAT, International Financial Statistics of the IMF; social - UNESCO, the United Nations trade statistics database, the International Telecommunication Union, postal statistics of the Universal Postal Union; political - Europa World Yearbook, CIA World Factbook, the Department of Peacekeeping Operations of the United Nations, the UN Treaty Collection.

Results and discussion

A comparative analysis of the concepts of competitiveness regarding national economy and existing methods for assessing the level of competitiveness allows us to draw the following conclusions:

- the definition of competitiveness at the state level has both a fairly broad interpretation ("...the degree of the ability of countries, subject to a free and fair market, to produce goods and services..." - the Commission for the Competitiveness Industry under the President of the United States), and a sufficiently narrow interpretation tied to either one block of parameters ("...the economic opportunity to pay for the funds received" - the World Bank for Development), or with one parameter ("...this is productivity" - M. Porter, Professor of Harvard business school);
- the indicators of the "competitiveness of the country" assessment often do not have the same basis for comparison and are used by the authors arbitrarily, for example, in the absence of initial data for countries, data from an earlier period are used for a given year;
- as a criteria for comparing some indicators, expert assessments are used, which reduce the degree of objectivity.

Conclusions

In conclusion, it should be noted that the most competitive world economies are those that concentrate their efforts on a whole set of factors that provide competitive advantages. At the same time, one should proceed from their interconnection and, therefore, the need for a systematic approach to strategic decision-making, to address the reasons preventing the setting of more ambitious goals and their consistent implementation.

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