

ПАНЕЛЬ 2.
СТАТИСТИЧНІ ВИКЛИКИ
ВИМІРЮВАННЯ ЦИФРОВОЇ ЕКОНОМІКИ

STATISTICAL ASSESSMENT
OF THE GLOBALIZATION DEVELOPMENT OF UKRAINE
(METHODOLOGY AND EVALUATION)

Mantsurov Ihor,
Dr. Sc. (Economics), Professor, Corresponding Member
of the National Academy of Sciences of Ukraine,
Director General of the Research Institute
for System Statistical Studies;
Khrapunova Yana,
Post-PhD researcher of Statistical Department,
Kyiv National Economic University
named after Vadym Hetman

The aim of this paper is to demonstrate on the Annual Conference the authors' point of view in regard to the methodological principles of the overall globalization process statistical evaluation and assessment. Particularly, methodological approaches to assessing the level of globalization development of countries on the basis of the composite index, which takes into account a full spectrum of indicators of socio-economic, innovative and environmental development of countries under the conditions of economic globalization have been developed and necessary calculations have been done on the this basis.

In the beginning of his presentation the authors are supposed to present the original definition of the process of globalization. According to this very short, however, clear enough definition; globalization is the permanently growing deep interaction and interdependence between nations, societies, territories and economies across comparatively large distances.

Obviously, this complex process has led to the progressive integration of the world economy through the resulting on the greater mobility of factors of production, i.e., capital and labor. The elements of globalization include free movement of goods and services, flow of capital, movement of labor and the transfer of technology. Apart from the economic benefits, globalization also indicates the flow of ideas, norms and information. There is a large heterogeneity in the degree of globalization over time

and across countries and regions of the world, as well as within different countries. The factors influencing globalization among the countries or territories take form of economic integration, personal contact, technology and political engagement [1, p. 18].

In order to trace the progress and slowdown of globalization, we first need to measure it. Traditional approaches to measuring countries' levels of globalization mostly rely on index compilation.

It is necessary to note that the globalization process may be measured by the certain number of individual indicators as well as by aggregate or composite indexes. These last ones are a powerful tool to capture and measure complex concepts that allow for monitoring complex systems over time and yield relative rankings and comparisons. So, the composite indexes usually measure multidimensional processes, which cannot be captured by a single indicator.

Existing analyses of globalization emphasize different factors as the key elements behind the contemporary impact of this phenomenon. In authors' opinion, rather than attempting to define globalization and determine its effects by emphasizing particular aspects or factors, it would be far more useful to adopt a more multidimensional [3], pluralistic approach (Fig. 1).

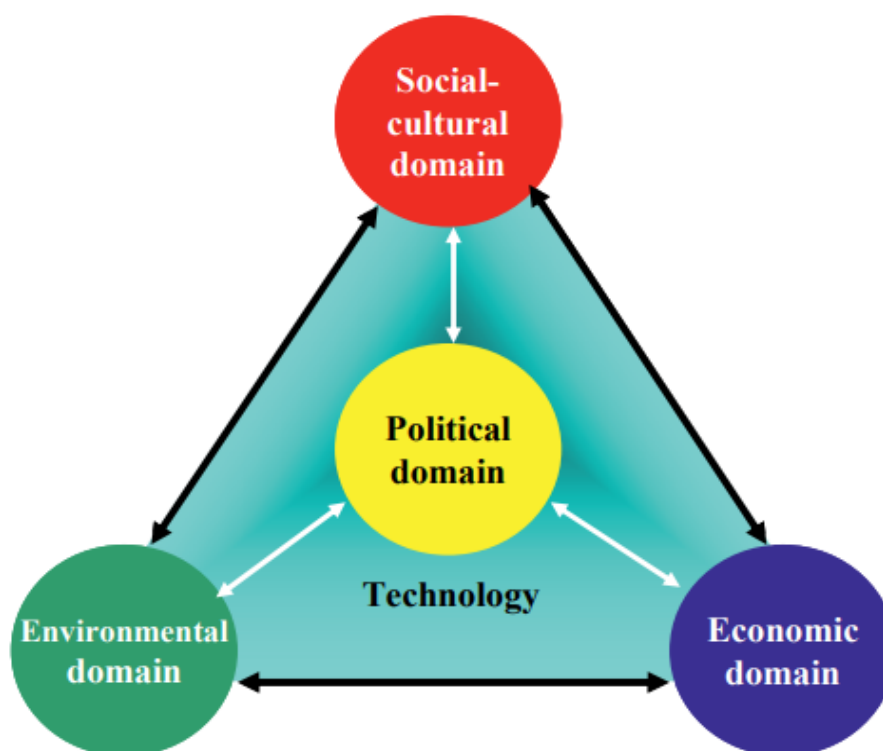


Figure 1. A pluralistic approach to globalization

Source: Langhorne R (2001) *The Coming of Globalization: Its Evolution and Contemporary Consequences*

The most widely known composite globalization indices include KOF Globalization Index, Maastricht Globalization World Index, A. T. Kearney / Foreign Policy Magazine Globalization Index, New Globalization Index (P. Vujakovic), Ernst & Young's Annual Globalization Index, etc. [2, p. 128].

Taking this into consideration the authors justify expediency of a formalized expression of globalization through sub-index of economic globalization (KOF Index of

Globalization methods). The material to be presented in the Conference proves statistically that intensification of economic globalization was the factor of integration of Ukraine into European and world economic, informational and social space allows activating the flow of goods, investments, information and interpersonal communication.

While discussing the recent attempts to measure globalization, the authors will focus most of his attention on the KOF Index of Globalization, which, according to the authors' point of view has arguably become the most widely used measure of globalization used by academic researchers and social scientists.

Following KOF Index of Globalization methodology, that has been modified by authors in order it would be able to be applied for Ukrainian national statistical system, globalization indices and similar composite indicators can be distinguished by their focus of measurement, which can be *de facto* or *de jure* measures, also labelled as activities and policies or output and input measures.

While *de facto* measures include variables that represent actual flows or activities, *de jure* measures include variables representing policies, resources or institutions enabling or facilitating actual flows and activities.

According to the author's point of view, it is advisable that a composite index only consists of variables from one focus of measurement to maintain a clear distinction between the *de facto* and *de jure* globalization. In this regard, *de facto* and *de jure* measures can differ substantially, when for example a policy is strict on paper, but toothless in practice.

In the revised KOF Globalization Index whose methodology is supposed to be presented in the Conference demonstrates the rigorous distinction between *de facto* and *de jure* measures of globalization in all dimensions and sub-dimensions of the index. This allows researchers to compare different outcomes of *de facto and de jure* globalization and the relationship between the two measures.

Authors would like to propose a new structure for the revised KOF Globalization Index, which introduces the differentiation between *de facto* and *de jure* globalization at every dimension and at every level of the index. In this structure, it is necessary to calculate a separate index for *de facto and de jure economic, social and political globalization*. On the sub-dimensional level a separate index for *de facto and de jure* trade, financial, interpersonal, informational and cultural globalization is calculated.

On the basis of the methodology presented above, the authors calculated individual and composite Globalization Indexes in 2018. The main results of these calculations are presented below [2].

Luxembourg has the highest level of globalization development among the countries under investigation with its integral index of 0.842. The top five countries include Switzerland (0.816), Ireland (0.769), the United States (0.755), Norway (0.740), and the Netherlands (0.739). The indicators of Japan and China are 0.665 and 0.514 respectively, with Japan having rather a high integrated Global Competitiveness Index of 0.937 [2].

The overall indicator, the integral index of globalization development of Ukraine, is 0.429(42.9%). In general, Ukraine is along with Bosnia and Herzegovina

(0.439), Moldova (0.432). By the level of globalization development, it exceeds the values of Tajikistan (0.414) and Pakistan (0.386) [2, 6].

On the basis of more detailed analysis that has been done taking into consideration the distinguish between the globalization *de facto* and *de jure* it is necessary to note that *economic globalization* has left the country only 89th in the world. However, in terms of de facto economic globalization, Ukraine ranks 26th, ahead of Germany, Poland, the Czech Republic, Slovakia and Lithuania but de jure, the country was only 120th place, which determined the low rating.

In terms of *social globalization*, the data shows that the real processes of economic globalization don't receive an institutional mechanism for promoting. Due to rating of social globalization, Ukraine was on the 97th place in the world (the *de facto* indicator is 78th, *de jure* – 102th). Here, the lack of mechanisms for promoting information, interpersonal and cultural globalization (*de jure globalization*) with the low level of real processes of globalization in society (communication, business communication and business relations, international tourism and migration) hinder the growth of globalization processes in the country's social sphere. Regarding political globalization, Ukraine occupies the 30th position in the world [2].

Additionally it has been proved that there is a strong positive not-linear correlation between Globalization Index and other aggregate indexes calculated by well-known international organizations. For instance, assessing the level of globalization of countries, it is important to analyze the Global Competitiveness Index suggested by the World Economic Forum. The topicality of the Global Competitiveness Index assessment of competitiveness is caused by the need to determine the preconditions for further development under the conditions of the fourth industrial revolution; identify macroeconomic challenges, strengths and weaknesses of the economies of the world, as well as factors that cause polarization of the world, development priorities, competitive advantages, contribution of countries to solving global problems.

The ranking of countries in terms of global competitiveness over the past five years was led by Switzerland, the index of which was 5.86 in 2017–2018. The world leaders in terms of global competitiveness include the United States, Singapore, the Netherlands, Germany, Hong Kong, Sweden, the United Kingdom, Japan and Finland. At the same time, the ranking of the Netherlands rose significantly from the 8th to the 4th position, whereas Finland's rating dropped from the 3rd to the 10th position.

Ukraine has improved its ranking by moving from the 85th to the 81st position. It was in 2016–2017 that the index of global competitiveness of Ukraine was the lowest over the previous five years. It was the highest (73rd) in 2012–2013. The main factors that caused the deterioration of the indicators in subsequent years were an unstable political and economic situation in Ukraine and military actions which shifted emphasis in the development [5].

The lowest ratings of Ukraine, among the countries by the Global Competitiveness Index, are observed in terms of indicators such as the State of the Macroeconomic Environment – the 121st position in 2017–2018, though it is by 13 positions or 9.7% higher than in 2015–2016; by the Institutions Development Index – the 118th position, which is by 12 positions or 9.2% higher than in 2015–2016.

The benchmarking value for the Globalization Index is 91.7; for Ukraine the given component is equal to 70.24; the weight of the indicator is equal to one; the

integral value is 0.051, which is 76.6% – the highest value among the investigated indicators. Switzerland is the leader by the Global Competitiveness Index and the Global Index of Innovation. For Ukraine, the integral values of these components are respectively 0.14 (70%) and 0.074 (55.6%). The Integral Index of Economic Freedom for Ukraine is 0.143, or 53.6% [5].

Conclusions. Globalization is a major factor affecting the current level of development in most countries of the world. Under the influence of this factor, there emerge new economic conditions that change the vector of the development. To identify both the level of globalization achieved by countries worldwide and the main factors that determine it, a methodological approach has been developed, which involves the calculation of the Globalization Index.

It has been proved that there is a strong positive not-linear correlation between Globalization Index and other aggregate indexes calculated by well-known international organizations.

Taking into account that these composite indexes as well as their desegregated individual indicators give a clear picture of the problems existing in the Ukrainian national economy authors are supposed to affirm that the main economic reasons behind the low indicators of globalization development in Ukraine are:

- instability of the banking system and national currency;
- growth of external public debt;
- decline in investment attractiveness of the country due to the increasing difficulty of contracting, worsening of foreign investors protection, ineffective operation of free economic zones and territories of the priority development;
- increasing monopolization of the national market, inferior methods of antimonopoly control and economic regulation;
- imperfection of the system of public administration and management at the level of entrepreneurship;
- lack of effective incentives for the development of small and medium-sized businesses;
- excessive migration of the population, with “the outflow of human capital” in particular;
- lack of intellectual business and ineffective development of the intellectual property institute;
- low level of the development of socio-economic infrastructure, road transport network and logistics systems in particular;
- lack of a clear development strategy with a step-by-step action plan in various socio-economic fields;
- lack of competitive advantages and selected development priorities that are globally understood.

References

1. Brune. N and Garrett G. (2005). The globalization Rorschach test: international economic integration, inequality, and the role of government. Annual Review of Political Science, 8, 399–423.

2. KOF Swiss Economic Institute. (2017). KOF Globalisation Index. Retrieved from <https://www.kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-globalisation-index.html>

3. Langhorne R. (2001). *The Coming of Globalisation: Its Evolution and Contemporary Consequences*. New York: Palgrave Macmillan, p. 155. (Ed.). *Competition in global industries*. Boston: Harvard Business School.

4. Sardak S. E., & Stavytska A. V. (2015). Priority directions and levers of the disclosure of the socio-economic potential of the state in the conditions of globalization. In *Modern Ukraine in the Global Environment: Strategic Guideline for Economic Development*. (pp. 332–346). Dnipro: Innovation [in Ukrainian].

5. Schwab K. (Ed.) (2017). *The Global Competitiveness Report 2017–2018*. Geneva: World Economic Forum. Retrieved from <http://www3.weforum.org/docs/>.

6. The World Bank (2017). World Bank Open Data. Retrieved from <https://data.worldbank.org>.

SPECIAL FEATURES OF CONSTRUCTION OF KEY PERFORMANCE INDICATORS (KPIs)

Potapova Maryna,

PhD in Economics, Associate Professor,
National Academy of Statistics, Accounting and Audit

Recently, KPIs have become more popular in estimating the performance of enterprise personnel. What can explain this surge in popularity? The prime reason is the importance to motivate employees. On the one hand, managers may not approve when their subordinates merely perform their duties. On the other hand, employees themselves should be interested in making sure the company achieves best results. The KPIs or Key Performance Indicators are aimed at quantifying the contribution of each employee to the achieved final result of the enterprise.

A properly established system of motivation in the organization is the key to balancing the interests of employees and the management. Regarding key performance indicators it is important to set their place in the business process of each enterprise – from priorities to specific actions (Figure).

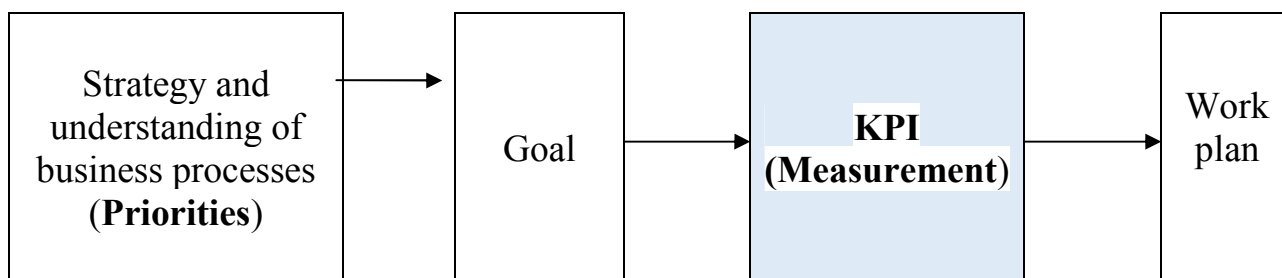


Figure. The place of key performance indicators in business processes
Source: [1, p. 6]