

METHODOLOGY

Index of Leftness (Rightness) of Economy for 2016 is a weighted average of six sub-indices:

- **Public Finance Sub-Index (PF),**
- **Price Regulation Sub-Index (PR),**
- **Foreign Trade Sub-Index (FT),**
- **Licensing Sub-Index (L),**
- **Employment Regulation Sub-Index (ER),**
- **Minimum Wage Sub-Index (MW).**

IL(R)E and its all sub-indices change in 0-1 interval. Zero indicates the extreme rightness of economy (absence of the government intervention), one – its extreme leftness (total government regulation). The indicators, except those for the Foreign Trade subindex and one indicator of the Employment Regulation subindex (Rigidity of Employment), were brought into this interval by the formula $(V_i - V_{min}) / (V_{max} - V_{min})$. With reference to the specifics of the basic statistics, the indicators mentioned above were brought into interval from 0 to 1 by the formula $(V_i - V_{max}) / (V_{min} - V_{max})$.

For some forms of the government intervention in economy (i.e. for some sub-indices) an absolute rightness, of course, is possible, but in general, a national economy can't take absolute right or left points. So all countries' IL(R)Es are at a certain distance from 0 to the left and from 1 to the right.

Just as in 2015, in calculations for 2016, the lowest possible (or supposedly minimal) indicator for each index is adopted as V_{min} , and the highest possible (or supposedly maximal) indicator as V_{max} . With the exception of the Price Regulation sub-index, the methodology for calculating sub-indices has not undergone major changes.



Public Finance Sub-Index expresses the level of income redistribution through taxes, and is calculated as a simple average of two indices – *Budget Expenditures Index* and *Business Tax Burden Index*. The former is calculated through indexing of the share of budget expenditures in GDP. IMF's *World Economic Outlook Database* is used as source for this information.* The latter is counted through indexing of the total taxes paid in a given year by a modeled company as share of its profit. Data is retrieved from the World Bank's "*Doing Business*" report.**

If there weren't resource exporters among the examined countries, the share of budget expenditures in GDP would albeit indirectly, but still adequately describe aggregate tax burden of businesses and citizens. In case oil and gas revenues transfers make up a significant portion of budget funds, there is a need to take into account tax burden indicators separately.

Some research institutions calculate tax burden on the basis of top tax rates on individual and corporate income. But tax payments on top rates both by citizens and companies are not typical for most countries. This is why tax payments of a hypothetical company are accepted as indicators to calculate the Business Tax Burden Index. Theoretically, Public Finance Sub-Index must also reflect the redistribution of national income via individual income tax, but some countries apply proportional and others progressive tax system, and it would be a mistake to make them single measure.

For both indices $V_{min} = 0$, and $V_{max} = 100$.

* <http://www.imf.org/external/pubs/ft/weo/2017/02/weodata/index.aspx>

** <http://www.doingbusiness.org/data/exploretopics/paying-taxes>



Price Regulation Sub-Index signifies the level of freedom of pricing (the right wing), and at the same time, the level of government interference in the price formation (the left wing). Approaching of PR Sub-Index of a country to 0 means that pricing is getting there more liberal, and in opposite, approaching to 1 means that government regulation of prices becomes more stringent. In IL(R)E – 2014 and IL(R)E – 2015 Reports PR Sub-Index was calculated as a simple average of *Price Freedom Index* and *Monetary Freedom Index*.

In this study, to measure the freedom of pricing the purchasing power parity (PPP) coefficients, which reflect both monetary and non-monetary, both formal and informal government interventions in pricing are used. For each country, this coefficient is calculated as the ratio of its GDP with PPP (i.e. GDP in international dollars) to GDP in current US dollars. Both indicators are from the IMF statistics.* Expressing the deviations of the general level of prices in individual countries from that in the US, the PPP coefficients, thereby, enable comparisons the overall level of prices in different countries.

Monetary regulation of prices (in general, the level of monetization of the economy, measured by the ratio of money supply in national currency to GDP) and the application of the upper limit to the prices of so-called strategic products (for example, energy) are the most important determinants of price differences between countries. The lower the monetization of economy (which reflects the rigidity of monetary regulation of prices) and the lower the upper limits of prices for products and services than their real market value (which reflects the rigidity of non-monetary price regulation), the lower the general level of prices in the country (i.e. prices more deviate from the level of prices in the US), and accordingly, the higher its PPP coefficient. Taking into account these dependencies, the PPP coefficients allow conducting more reliable international comparisons in price regulation than other available indicators.

When indexing the PPP coefficients, it is assumed that $V_{min} = 0.1$, $V_{max} = 10$.

* <http://www.imf.org/external/pubs/ft/weo/2017/02/weodata/index.aspx>



Foreign Trade Sub-Index measures the freedom of foreign trade (the right side) and the rigidity of foreign trade regulations that in most cases are related to protection of domestic market (the left side). If FT Sub-Index of a country goes down to 0, it means that freedom of this countries' companies to trade internationally is getting higher; if government regulations of foreign trade are becoming stricter then FT Sub-Index approaches to 1.

The concept relies on three principles. First, the foreign trade freedom should be measured by the freedom of imports, not exports. Second, as a rule, the higher the freedom of imports, the weaker the domestic market protection, but stricter regulations does not necessarily mean better protection. Third, for countries where natural resource exports constitute a significant part of the economy, foreign trade freedom can't be measured through the absolute volume of export-import operations or their relative values (e.g. the exports and imports to GDP ratios).

FT Sub-Index is calculated as an average of three indices – *Foreign Trade Freedom*, *Economic Value of Imports*, and *Trade Freedom*. Foreign Trade Freedom Index is calculated based on Freedom to Trade Internationally ratings by the Fraser Institute (*Economic Freedom of the World 2016*)*. Economic Value of Imports Index is calculated based on Domestic Market Access scores by World Economic Forum's the *Global Enabling Trade Report 2016***, and Trade Freedom Index is calculated based on the indices of the same name from the *2015 Economic Freedom Index* jointly presented by the Heritage Foundation and The Wall Street Journal.***

For Foreign Trade Freedom Index – $V_{min} = 0$, $V_{max} = 10$, for Economic Value of Imports Index – $V_{min} = 0$, $V_{max} = 7$, and for Trade Freedom Index – $V_{min} = 0$, $V_{max} = 100$. In the statistical bases used in calculation higher scores express less government intervention, and therefore final values of FT Sub-Index are obtained by subtracting from 1.

* <https://www.fraserinstitute.org/sites/default/files/economic-freedom-of-the-world-2016.pdf>

** http://www3.weforum.org/docs/WEF_GETR_2016_report.pdf

*** http://www.heritage.org/index/pdf/2016/book/index_2016.pdf



Licensing Sub-Index. The evaluation of the leftness-rightness of an economy upon the ease or difficulty of licensing requires consideration of four parameters: a) number of economic activities obligatory to licensing, b) variety of licensed activities, c) validity time of licenses, d) licensing rules. The more favorable these parameters are for businesses (i.e. less number, narrower list, longer term and simpler rules), the righter is an economy. However, sufficiently accurate inter-country comparisons on any of these parameters are unobtainable.

Consequently, Licensing Sub-Index calculations lean on the World Bank's methodology and are done using indicators of time and cost that the hypothetical

company spends to obtain necessary licenses and permits for a construction (*Doing Business 2016: Dealing with Construction Permits*).* Licensing Sub-Index is a simple average of two indices calculated by using two respective series of data. The World Bank's third indicator (number of procedures) is not considered as far as it distorts the overall picture of simplicity (complexity) of licensing.

For Licensing Time Index – $V_{min} = 0$, $V_{max} = 1000$, and for Licensing Cost Index – $V_{min} = 0$, $V_{max} = 100$.

* <http://www.doingbusiness.org/data/exploretopics/dealing-with-construction-permits>



Employment Regulation Sub-Index measures to what extent a government intervenes in the relationship between employer and employee, and regulates the labor process. Unlike some conventional social programs, this interference *directly* aims social protection purposes. As a rule, the reinforcement of direct social protection of employee costs the limitation of employer freedom.

ER Sub-Index is calculated based on two indices – *Rigidity of Employment* and *Redundancy Cost*. In IL(R)E – 2015 Report the former was the average of 3 indicators: *difficulty (ease) of hiring*, *rigidity (flexibility) of working hours* and *difficulty (simplicity) of redundancy*. Considering the higher importance of the Rigidity of Employment Index, it was weighted as 0.75 and Redundancy Cost Index as 0.25. As data on the working hours regulation is currently unavailable, in the study for 2016 the Rigidity of Employment Index is calculated based just on two indicators: *difficulty (simplicity) of hiring* and *firing*. And when calculating the Sub-index, the Rigidity of Employment Index and the Redundancy Cost Index are weighted as 2/3 vs 1/3, accordingly. The statistical database of World Economic Forum 2015 is used in calculations.*

When evaluating business environment, the research institutions usually rank the countries “from good to bad”, that is, from the countries with more favorable environment for business to those that complicate business activities with tough regulations. Classification of economies on the basis of leftness-rightness does not assume “bad or good” countries; this approach just indicates that there are countries with righter or lefter economy. The higher priority for the first ones is the freedom of companies, and for the second ones – the social protection of workers.

For the Rigidity of Employment Index it is assumed that $V_{min} = 0$, $V_{max} = 7$, and for the Redundancy Cost Index – $V_{min} = 0$, $V_{max} = 78$. Redundancy Cost is a sum of advance notice cost and severance payments, expressed in week wages. The maximum level of this indicator for the analyzed countries is 58.5 weeks. Therefore, 78 weeks (the number of weeks in 1.5 year) are conventionally taken as V_{max} (i.e. the extreme left point).

* http://www3.weforum.org/docs/gcr/2015-2016/Global_Competitiveness_Report_2015-2016.pdf



Minimum Wage Sub-Index is the indexed version of share of legal minimum wage in GDP per capita (both with correction for PPP). The level of minimum wage directly affects the leftness-rightness of economy. Its increase, as of some other indicators, enhances both the leftness of economy and the degree of its social orientation.

The economies where the minimum wage level is regulated neither by law nor collective agreements are located on the absolute right (zero) point. The countries where its level is regulated only by collective agreements, but not by law are conditionally placed on 0.050 point, and the economies where it is regulated by government, but for a limited number of employees are located on 0.080 point.

Statistical data on annual minimum wage by countries is retrieved from the *Wage Indicator** and *Minimum-wage***.

It is accepted that $V_{min} = 0$, $V_{max} = 100$.

* <https://wageindicator.org/main/salary/minimum-wage>

** <https://www.minimum-wage.org/international>



In calculations of the final Index of Leftness (Rightness) of Economy the higher weight is given to Public Finance Sub-Index:

$$IL(R)E_i = 0.30*PF_i + 0.14*PR_i + 0.14*FT_i + 0.14*Li + 0.14*ER_i + 0.14*MW_i$$