

METHODOLOGY

The Index of Leftness (Rightness) of Economy is a weighted average of seven sub-indices:

- **Public Finance Sub-Index (PF),**
- **Social Expenditures Sub-Index (SE),**
- **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 all its sub-indices change in 0-1 interval. Zero indicates the extreme rightness of economy (absence of governmental intervention), one – its extreme leftness (total government regulation). The indicators were brought into this interval by the formula $(V_i - V_{min}) / (V_{max} - V_{min})$, and in some cases subtracted from 1.



Public Finance Sub-Index expresses the level of income redistribution through taxes, and is calculated as an arithmetical mean 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 of this information. * The latter is counted through indexing of the total tax rate 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-gas transfers make up significant portion of budget funds, there is 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, others progressive tax system and it would be a mistake to make them single measure.

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<http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx>

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



Social Expenditures Sub-Index measures the leftness-rightness of economy based on the budget expenses composition and is calculated through the share of budgetary social expenditures in total expenditures of budget. Hypothetically, a country with no social expenditure should be located at the extreme right point, and a country that spends all its budget funds for social purposes – at the extreme left point. But it's quite clear that neither first nor second countries are existed. This is

why in order to compress sub-index into 0.1-0.9 interval V_{max} and V_{min} are taken as 69.0 and 5.5 accordingly, and formula obtained as $(V_i - 5.5)/63.5$.

Unlike other sub-indices, Social Expenditures Sub-Index reflects not strictly the level of government interference in economy, but its core, and therefore the second version of IL(R)I is calculated without SE.

Since a single source of statistical information on share of budgetary social expenditures for all the countries under view is not available, it is calculated based on two indicators – “The share of budget expenditures in GDP” and “The share of social expenditures of budget in GDP”. The share of budget expenditures in GDP indicators are retrieved for the IMF database.* The second set of indicators for the developed countries is taken from the OECD statistics (*OECD Stat Extracts: Social Expenditures – Aggregated Data*), **and for the rest of countries is calculated based on information from various sources, including international organizations’ reports and the national statistics agencies’ databases.

As the OECD is the only statistical source for the budgetary social expenditures in GDP, the corresponding indicators for other countries are adapted to the OECD methodology (for instance, the budgetary expenses for education are not included in the social expenditures of budget). Besides, IMF’s share of budget expenditures in GDP indicators normally are calculated based on the consolidated budget, not the actual state budget (such as for Azerbaijan). For this reason, the shares of social expenditures in state budget provided by official statistics in some countries may differ from those that are used in this research.

* <http://www.imf.org/external/pubs/ft/weo/2014/01/weodata/index.aspx>

** http://stats.oecd.org/Index.aspx?datasetcode=SOEX_AGG



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 zero means that pricing is getting there more liberal, and in opposite, approaching to one means that government regulation of prices becomes more stringent. PR Sub-Index is calculated as a simple average of *Price Freedom Index* and *Monetary Freedom Index*. The former is estimated based on Fraser Institute’s (Canada) *Economic Freedom of the World* report for 2011 (following years data on freedom of companies in pricing was not developed as a separate set)*; the latter – based on data presented in *2014 Index of Economic Freedom* report by the Heritage Foundation and The Wall Street Journal.**

* http://www.freetheworld.com/2011/reports/world/EFW2011_complete.pdf

** <http://www.heritage.org/index>



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 zero 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 one.

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 export and import 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 2013*)*. Economic Value of Imports Index is calculated based on Domestic Market Access scores by World Economic Forum's the *Global Enabling Trade Report 2014****, and Trade Freedom Index is calculated based on the indices of the same name from the *2014 Economic Freedom Index* jointly presented by the Heritage Foundation and The Wall Street Journal.***

* http://www.freetheworld.com/2011/reports/world/EFW2011_complete.pdf

** <http://reports.weforum.org/global-enabling-trade-report-2014>

*** <http://www.heritage.org/index>



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 2014: 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.

* <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*. The former, in turn, is the average of 3 indicators: difficulty (ease) of hiring, rigidity (flexibility) of working hours and difficulty (simplicity) of redundancy. Redundancy Cost is a sum of advance notice cost and severance payments. Considering the higher importance of the Rigidity of Employment Index, it is weighted as 0.75, and Redundancy Cost Index, accordingly, as 0.25. The statistical database of 2010 Doing Business report is used in calculations (starting 2011, Rigidity of Employment Index and its components are excluded from the main content of Doing Business, and included in auxiliary list).*

When evaluating business environment the World Bank ranks 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 first ones is the freedom of companies, and for second ones – the social protection of workers.

* <http://www.doingbusiness.org/~media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB10-FullReport.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 many 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 0.080 point, and the economies where it is regulated by government, but for a limited number of employees are located on 0.100 point. Certainly, it is unreal that any country occupies the extreme left (one) point, because for that its minimum wage must exceed, or to be equal or, at least, to be very close to GDP per capita. This is why MW Sub-Index of the economy with maximal share of annual minimum wage in GDP per capita is accepted as 0.800.

Statistical data on annual minimum wage by countries is retrieved from the *Wage Indicator** and *Wikipedia*.** GDP per capita indicators are extracted from the *World Bank's database*.*** World Bank's PPP coefficients for 2012 are used for correction of minimum wage indicators.**** The minimum wages in national currencies are converted to US dollars using official exchange rates available at World Bank's database.*****

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

** http://en.wikipedia.org/wiki/List_of_minimum_wages_by_country

*** <http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD>

**** <http://data.worldbank.org/indicator/PA.NUS.PRVT.PP>

***** <http://data.worldbank.org/indicator/PA.NUS.FCRF>



Index of Leftness (Rightness) of Economy (integral index) is calculated in two versions. First version considers all sub-indices with roughly equal weights. Second version does not consider SE Sub-Index, but gives higher weight to PF Sub-Index.

First version:

$$IL(R)E = 0.15*PF_i + 0.15*SE_i + 0.14*PR_i + 0.14*FT_i + 0.14*Li + 0.14*ER_i + 0.14*MW_i$$

Second version:

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

Further analysis in Report is based on the second version of IL(R)E calculation.