National Competitiveness: Alternative Methodologies of Evaluation and Contemporary Conditions for Growth (Russian Federation Case Study)

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Abstract. Growth of national competitiveness belongs to the key priorities in economic strategies of the contemporary states. This article offers an author’s methodology of determining the synthetic indicator of national competitiveness which takes into account not only internal factors of national efficiency, but also country’s external economic positioning within the structure of world economic relations and international labor distribution. On the basis of the obtained here results the authors present their own recommendations on how to boost the growth of national competitiveness in the case of Russian Federation.

1. Introduction

Competitiveness today belongs to the strategic guidelines of the macroeconomic systems’ development worldwide; especially taking into account that world competition is getting only severe all the time. Therefore, the issue of competitive advantages’ determination, their internal connection and peculiarities of formation by means of both national and external resources is not only relevant for most of the countries worldwide, but in many cases even quite urgent.

In case of Russia specifically this topic is getting especially relevant due to the number and strength of shocks Russian economy has been experiencing recently. Most of these shocks are related to the country’s rather dramatic transition from the nearly fully closed and self-sufficient economic system to the economy of an open type. Negative consequences from this transition include lowering of the welfare level, shadow economy’s manifestations, problems with budget balance and sustainable economic development overall. Most of these problems are also the natural derivatives from the low national competitiveness level.

The research aim of this study is to carry out the qualitative-quantitative analysis of the competitive advantages of the largest economic systems of this world so that to outline the key principles to be taken into account in the course of practical implementation of the national strategy on increasing the global competitiveness of Russia’s economy.

In connection to this research aim formulated above the following tasks have been put forward:

To develop a methodology for evaluation of competitive advantages available in various countries worldwide. The methodology is supposed to take into account the indicators of internal demand, the efficiency of public regulation and the intensiveness of country’s external economic activity;

Then, to determine the key principles along with the instruments to be used in the course of the related state policy implementation, aimed at the competitive advantages’ accumulation and growth;
To evaluate, objectively and fairly, the competitive advantages of today’s Russia within the world economic context so that to formulate the priorities of its further progress taking into account the current trends of the world economic development along with the principles of economic security and economic efficiency;

Referring to the available international experience and the results of the authors’ own evaluation of the contemporary economic standing of Russia, to put forward practical recommendations on the implementation of state policy of the national competitiveness stimulation.

2. Theoretical analysis
Analysis of the already available approaches to determination of states’ competitiveness within the structure of world economy enables outlining a range of both external and internal manifestations of this indicator of the contemporary economic system.

| Table 1. Contemporary definitions of national competitiveness (compiled by the authors). |
|---|
| 1 | Capacity of a country to produce, being within the frameworks of free and fair market relations, commodities and services which comply to the requirements of the international market (Report of the President's Commission on Industrial Competitiveness, 1985). |
| 2 | The capacity to produce commodities and services which are able to satisfy the demand at international markets and at the same time also able to guarantee own citizens of a country have high enough level of welfare and the opportunity to maintain this welfare in the long term (Competitiveness Policy Council, 1992). |
| 3 | The capacity of a country to achieve high rates of the per capita GDP growth increase (World Economic Forum, 2006–2007) |
| 4 | Supporting the capacity of companies, enterprises, regions, countries and supranational regions to maintain high enough level of income and employment for the local population, being at the same time exposed to international competition (OECD, 1996) |
| 5 | The field of economic knowledge, responsible for facts’ analysis and policy-making which, in their turn, are forming the country’s capacity to create and maintain the conditions necessary for the value added formation by the enterprises and thus for higher level of population welfare (World Competitiveness Yearbook, 2016) |
| 6 | Competitiveness contains the elements of productivity, efficiency and profitability. However, these elements alone are not sufficient as such and are not the end goal. These are the powerful instruments to be used to achieve higher quality of life and material welfare, that is, these are the instruments for problem solving only. On a global scale, competitiveness is the basis for increasing the incomes of population by the least inflation-provoking way (Ciampi Group, 1995) |

It would be logical to treat the following features as the external manifestations of high level of country’s competitiveness: efficient export; solid positioning in the international labor distribution; investment attractiveness; stable rate of economic development; mobility of the national economic system; lack or very low level of external debt; active investments outflowing from this country; presence of national corporations carrying out active external economic activities (Dzeng & Wang, 2007).

According to Sergio Parrinello (2006) and Raul Fabella (1995) competitiveness means the country is able to demonstrate certain internal economic achievements as well, including: strong and constantly growing internal consumption market which is demonstrating demand of a certain quality level; availability of the own innovation model along with the system for generation and commercialization of innovations; maximum employment rate and minimum unemployment rate; high efficiency of national social welfare programs and stability of the social environment overall; efficient and fair system of incomes’ distribution inside the state; harmonious structure and balance of the
internal economic system; equally balanced development of the three sectors within national economy – agrarian, industrial and services; overall mostly liberal conditions for doing business; efficient prevention of monopolization on the side of the state; wide opportunities for new sectors and new enterprises to emerge and develop; high level of internal competition, since without it formation of external competitiveness is hardly possible.

3. Alternative model of the national competitiveness evaluation

The methodology of quantitative-qualitative analysis to be applied for most adequate evaluation of competitiveness is supposed to determine, in the first place, the efficiency of an economic system functioning and not only resources’ availability or presence of certain strong production factors.

This methodology, to be short, is supposed to reveal not the presence of certain factors but their smart application in the course of production. Moreover, it must also take into account the potential disproportions or misbalances and take into account the potential size of internal consumption (Dimian & Danciu, 2011). On the top of all of the above, it is also supposed to reveal the efficiency of state regulation over the national economic system (Pereira & Fernandes, 2006) and indirectly assess the external trade success of the country (Bazavluk, 2014). Finally, it must track the development of national business along with the levels of its transnationalization and investment attractiveness.

For the following analysis and further ranking of the countries according to the level of their competitiveness we would like to offer the following set of indicators united in such groups (for each synthetic indicator (SI 1,2,3,4), 1 is Russia, and indicators of all other countries are compared to the latter. Further, all these indicators are assigned equal weights, and then the overall indicator is calculated which serves as the basis for the countries’ ranking of competitiveness. Initially, we selected 60 largest economies of the world actually, taken as according to their purchasing power, which must have been at least over 100 bln USD as of 2016):

1. Indicators of the national economic system’s efficiency (including: labor productivity, indicators of the fair distribution of incomes, see Table 2, efficiency of electrical energy consumption and key energy sources, see Table 3). Synthetic indicators 1 (SI-1) are presented in Table 4;

2. Indicators of the national economic system’s balance (here indicators of labor productivity were also used but this time taken separately for all three sectors and calculated as per share of each of them in GDP and in correlation to population employment. Synthetic indicators 2 (SI-2) are presented in Table 5;

3. Indicators of the external trade operations’ efficiency. These were estimated on the basis of the detailed analysis of the following indicators: the volumes of export and import in both absolute terms and per capita; the correlation between exports and imports in relation to GDP in its purchasing power balance; variety of both exports and imports; overall representation of a country at the world markets (the number of countries for which the analyzed state is among top-5 trade partners either in imports, or in exports); the share of high-tech products in national export/import or/and the share of products with high added value. Synthetic indicators 3 (SI-3) are presented in Table 6;

4. Efficiency indicators of both national and transnational businesses (inflow and outflow of capital from the country, overall level of the national economic system capitalization). Synthetic indicators (SI-4) are presented in Table 7.

After we have determined all the indices, it is possible to calculate the aggregated one, and then, on its basis – to compile our own ranking of countries according to the level of their competitiveness under contemporary conditions (see Table 8).

The final results of the research presented here (see Table 9) can be compared with the famous other rankings, including the one by the World Economic Forum, for example.
Table 2. Labor productivity in the selected countries worldwide, 2016\textsuperscript{1}.

| Rank | Country | Labor productivity, 000 USD, 2016\textsuperscript{2} | Rank | Country | Efficiency of the internal distribution of incomes and welfare, % in 2016\textsuperscript{4} |
|------|---------|------------------------------------------------------|------|---------|--------------------------------------------------|
| 1    | Norway  | 101.21                                               | 1    | UAE     | 49.93                                             |
| 2    | USA     | 94.75                                                | 2    | Kuwait  | 61.72                                             |
| 3    | Austria | 93.22                                                | 3    | Singapore | 70.41                                           |
| 4    | Netherlands | 88.08                                              | 4    | China   | 71.04                                             |
| 5    | Ireland | 87.91                                                | 5    | Thailand | 78.44                                             |
| 6    | Singapore | 84.69                                              | 6    | Switzerland | 89.65                                      |
| 7    | Malaysia | 82.04                                               | 7    | Norway  | 90.96                                             |
| 8    | Belgium | 81.95                                                | 8    | Vietnam | 93.7                                              |
| 9    | France  | 80.26                                                | 9    | Canada  | 95.39                                             |
| 10   | Switzerland | 77.94                                             | 10   | Denmark | 95.92                                             |
| 39   | Russia  | 29.76                                                | 15   | Russia  | 101.13                                             |

Table 3. Ranking of countries by the levels of their electric energy consumption efficiency and key energy sources, as of 2016\textsuperscript{3}.

| #   | Efficiency of electric energy consumption | Efficiency of natural gas consumption | Efficiency of oil products’ consumption | Average rank of efficiency for energy consumption and energy sources’ use |
|-----|-------------------------------------------|---------------------------------------|-----------------------------------------|------------------------------------------------------------------------|
| 1   | Angola 7.12                                | Ecuador 7                              | Bangladesh 2.61                         | Angola 3.73                                                            |
| 2   | Nigeria 2.98                                | Sweden 6.65                            | Angola 1.98                             | Equador 3.19                                                           |
| 3   | Equador 1.92                                | Israel 4.16                            | Slovakia 1.57                           | Sweden 2.69                                                            |
| 4   | Bangladesh 1.82                            | South Africa 3.92                      | Poland 1.46                            | Israel 1.96                                                            |
| 5   | Peru 1.67                                  | Peru 2.56                              | Peru 1.43                              | Peru 1.89                                                             |
| 6   | Colombia 1.41                              | China 2.22                             | Turkey 1.46                             | South Africa 1.74                                                       |
| 7   | Algeria 1.4                                | Greece 2.11                            | Hungary 1.36                            | Bangladesh 1.57                                                        |
| 8   | Ireland 1.33                               | Angola 2.1                             | India 1.33                             | Nigeria 1.52                                                           |
| 9   | Indonesia 1.33                             | Philippines 1.9                        | Colombia 1.31                          | Greece 1.33                                                            |
| 10  | Mexico 1.26                                | Brazil 1.82                            | Denmark 1.29                           | Philippines 1.32                                                        |

\textsuperscript{1} Only top-10 + Russia are shown
\textsuperscript{2} In the rank-decreasing order
\textsuperscript{3} Calculated based on GDP (PPP), number of labor resources and unemployment rate in the countries of the world
\textsuperscript{4} Show the difference in levels of labor productivity and GDP per capita
\textsuperscript{5} Calculated as the ratio of GDP (PPP) to the amount of electricity, gas and oil consumption respectively.
Table 4. The synthetic index of the economic systems’ efficiency (SI-1), as of 2016.

| #  | Country  | Index | #  | Country  | Index |
|----|----------|-------|----|----------|-------|
| 1  | Sweden   | 13,57 | 51 | Romania  | 1,39  |
| 2  | Israel   | 8,92  | 52 | Algeria   | 1,31  |
| 3  | Switzerland | 4,66  | 53 | India     | 1,3   |
| 4  | Taiwan   | 3,58  | 54 | Venezuela | 1,28  |
| 5  | Ireland  | 3,44  | 55 | Iran      | 1,12  |
| 6  | Norway   | 3,28  | 56 | Egypt     | 1,08  |
| 7  | Portugal | 3,11  | 57 | Russia    | 1     |
| 8  | Japan    | 3,1   | 58 | Philippines | 0,92 |
| 9  | Denmark  | 3,05  | 59 | Brazil    | 0,92  |
| 10 | France   | 2,93  | 60 | Ukraine   | 0,85  |

Table 5. Indices of the balanced development for various national economies worldwide, SI-2 as of 2016.

| #  | Country  | Index | #  | Country  | Index |
|----|----------|-------|----|----------|-------|
| 1  | India    | 1,99  | 14 | Russia   | 1     |
| 2  | Peru     | 1,98  | 51 | Switzerland | 0,34 |
| 3  | Portugal | 1,93  | 52 | Finland  | 0,32  |
| 4  | Philippines | 1,82  | 53 | Israel    | 0,32  |
| 5  | China    | 1,75  | 54 | Ireland  | 0,28  |
| 6  | Equador  | 1,65  | 55 | South Korea | 0,26 |
| 7  | Indonesia| 1,45  | 56 | Kuwait   | 0,2   |
| 8  | Czech Rep| 1,44  | 57 | Norway   | 0,17  |
| 9  | Ukraine  | 1,38  | 58 | UAE      | 0,11  |
| 10 | South Africa | 1,27  | 59 | Saudi Arabia | 0,11 |

Table 6. Indices of countries’ external trade efficiency, SI-3 as of 2016.

| #  | Country  | Index 3 | #  | Country  | Index 3 |
|----|----------|---------|----|----------|---------|
| 1  | Germany  | 67,01   | 16 | Russia   | 1       |
| 2  | USA      | 46,07   | 50 | Colombia | 0,003   |
| 3  | France   | 28,66   | 51 | Egypt    | 0,003   |
| 4  | Italy    | 23,98   | 52 | Vietnam  | 0,001   |
| 5  | Singapore| 20,25   | 53 | Nigeria  | 0,001   |
| 6  | UK       | 17,41   | 54 | Philippines | 0,001 |
| 7  | South Korea | 11,3   | 56 | Algeria  | 0,0009  |
| 8  | Japan    | 9,66    | 57 | Angola   | 0,0006  |
| 9  | Netherlands | 9,44  | 58 | Pakistan | 0,0006  |
| 10 | Spain    | 6,52    | 59 | Peru     | 0,0005  |

The top-10 of leaders does not change much, actually. It is represented by the US, countries of Western Europe (in which France and Italy got higher ranks than Denmark and Finland mostly due to more efficient external trade of the former, while Germany is stably #1 for exactly the same reason, even though by many other parameters, such as overall efficiency of the national economic system, state regulation or level of innovativeness, Germany is far behind Scandinavian countries. Asia in this part of the ranking is represented by Singapore and Kuwait, and the success of the latter is predetermined mostly by high efficiency of the national financial system, even though its external economic efficiency is quite low, actually.
Table 7. Efficiency indices of national and transnational businesses, SI-4 as of 2016.

| #  | Country     | Index 5 | #  | Country     | Index 5 |
|----|-------------|---------|----|-------------|---------|
| 1  | Kuwait      | 27,4    | 33 | Russia      | 1       |
| 2  | Switzerland | 13,6    | 51 | Ukraine     | 0,18    |
| 3  | Belgium     | 11,17   | 52 | Algeria     | 0,18    |
| 4  | Singapore   | 10,01   | 53 | Indonesia   | 0,11    |
| 5  | Netherlands | 8,98    | 55 | India       | 0,11    |
| 6  | UK          | 6,51    | 56 | Nigeria     | 0,097   |
| 7  | Ireland     | 6,32    | 57 | Vietnam     | 0,085   |
| 8  | Saudi Arabia| 6,04    | 58 | Iran        | 0,083   |
| 9  | Sweden      | 5,88    | 59 | Pakistan    | 0,08    |
| 10 | Denmark     | 5,44    | 60 | Bangladesh  | 0,012   |

Table 8. The aggregated index of global competitiveness, as of 2016.

| #  | Country 6 | Aggregated index |
|----|-----------|------------------|
| 1  | Germany   | 16,81            |
| 2  | USA       | 15,62            |
| 3  | Kuwait    | 10,67            |
| 4  | Singapore | 10,14            |
| 5  | Sweden    | 10,09            |
| 6  | France    | 9,92             |
| 7  | Netherlands| 8,41             |
| 8  | Switzerland| 8,41             |
| 9  | UK        | 8,31             |
| 10 | Italy     | 8,21             |
| 39 | Russia    | 2,57             |

Selected data

Table 9. Comparison of the competitiveness levels for the selected countries of the world, as of 2016.

| Our own results | World Economic Forum data |
|-----------------|---------------------------|
| 1 Germany       | 1 Switzerland             |
| 2 USA           | 2 USA                     |
| 3 Kuwait        | 3 Singapore               |
| 4 Singapore     | 4 Sweden                  |
| 5 Sweden        | 5 Denmark                 |
| 6 France        | 6 Finland                 |
| 7 Netherlands   | 7 Germany                 |
| 8 Switzerland   | 8 Japan                   |
| 9 UK            | 9 Canada                  |
| 39 Russia       | 63 (53) Russia            |

6 Selected data
The key differences between the results of these two studies and methodologies are to a larger extent predetermined by the fact that in our analysis we have been taking into account the factors of external trade activities and their efficiency (export first of all) as well as the factor of income distribution fairness when it comes to working population in a particular country. This factor contributed significantly to higher rankings (as compared to the ranks according to the World Economic Forum methodology) of the selected socially oriented states (France and Italy, in particular) and also of the countries with wider geography or more diverse structure of export (including Netherlands, Great Britain, Israel an China). At the same time, countries which are experiencing certain financial problems and/or have limited export capacities (such as UAE, Japan, Canada and Czech Republic) got lower ranks of their global positioning according to the suggested here methodology.

Separately we should mention Russia along with other BRICS members. According to our results, all these countries got higher ranks (even when adjusting the results taking into account the difference between the numbers of the countries analyzed). The leader in this group is China (ranked 21st as opposed to the 31st position in the WEF ranking), being followed by India (29th as opposed to being 41th). According to the WEF methodology of assessment, Brazil is more competitive than Russia (though the difference is narrow, 51st and 53rd ranks accordingly), while according to our assessment, Russia got significantly better results (39th rank as opposed to 49 for Brazil). The difference is larger in the latter case because Russia managed to demonstrate better results on all the indices but for innovative modernization and efficiency of state regulation. Despite that, positioning of Russia within the world system of economic distribution is still very far from truly competitive indicators. The country got the worst results among all European countries, including Eastern European ones. By many indicators it is also far behind many other developing countries, including India, Mexico, Malaysia, the Philippines etc. And what is most important, Russia’s ranks are simply incomparable with the indices of other oil exporters – Saudi Arabia, Kuwait and UAE.

4. Conclusion
The carried out analysis of the indices of national economic systems’ efficiency and external competitiveness for the selected countries worldwide allows us make the following conclusions concerning Russia’s ranking within the global context:

- the country is seriously far behind the economic leaders of the world. In particular, labour productivity indicator of Russia is five times lower than that of Norway, 4 times – as compared to the USA, Austria or Netherlands, and 2.5 lower that the same indicators for Israel and Greece;
- However, Russia has a relatively efficient system of internal welfare distribution (which demonstrates the difference between labor productivity and income per capita in a country). By this indicator Russia belongs to the same group with such countries as Australia and Sweden;
- Russian Federation is an obvious outsider concerning the efficiency of energy consumption and electricity in particular. Moreover, Russia is ranked the lowest in the world by the indicator of natural gas consumption efficiency;
- the structure of Russian economy is quite balanced, all sectors of the national economy are developing with a more or less equal rate;
- Russia’s export demonstrates relative efficiency (mostly due to such factors as large numbers of consumers available for nearly all groups of exported products and also wide geography of the exported products’ consumption). Import is also relatively efficient. Therefore, the index of external trade activity is quite high overall;
- Russia lags behind many developing countries when it comes to the index of socioeconomic advantages from innovative modernization of the national economic system (41th rank of the general ranking);
- the country has very low indicators of financial competitiveness (which symbolizes the role and the position of the country in the international distribution of financial resources).
Thus, among 60 selected for this analysis countries Russia got the 39th overall rank of global competitiveness. Its under run from the most developed countries of the world is quite large: fivefold – from Germany and the US, 3.5 fold – from France, Sweden and Singapore, twofold – from Japan, Norway and Australia. At the same time, Russia is more or less on the same level of global competitiveness with such countries as Poland, Mexico and Turkey.

The presented here assessment of foreign experience in the field of state stimulation of the national competitiveness, contemporary understanding of the national competitive advantages and also analysis of the socioeconomic indicators of Russia’s development overall enabled our determination of the key directions and instruments of the state policy aimed at stimulation of the national competitiveness growth.

These directions and instruments are presented in Table 10:

**Table 10. Measures which are supposed to boost the growth of Russia’s national competitiveness.**

| #  | Direction of modernization                          | Steps to be taken                                                                 |
|----|-----------------------------------------------------|-----------------------------------------------------------------------------------|
| 1  | General economic measures                           | Restoration of investment preferences on the income tax. Making the depreciation policy more oriented on intensification of the fixed assets’ renovation |
|    | 1.1 Modernization of taxation                       |                                                                                   |
|    |                                                     | Emphasis must be shifted from M&As and capital concentration on more active measures against the misuse of monopoly position |
|    | 1.2 Changes in the anti-monopoly policy              |                                                                                   |
|    | 1.3 Development of the state system of forecasting  | The system of state forecasting must be oriented on the constant search for potential breakthrough points and on overcoming the development inertia. Forecasting should be also aimed at detecting the most profitable potentially markets, development prospects in terms of demand and technologies, risks analysis etc. |
|    | 1.4 Diplomatic actions taken to increase competitiveness |                                                                                   |
| 2  | Sector-specific measures                            | Decreasing rates to the zero level for the selected types of products (mostly those that are not being produced on the territory of Russian Federation as such) |
|    | 2.1 Customs tariffs                                 | Development of industrial infrastructure nationwide so that to guarantee and maintain wider access to the world markets |
|    | 2.2 Infrastructure                                  |                                                                                   |
|    | 2.3 Active support for innovations                  | Shared financing of the most potentially efficient innovative projects. Support and better motivation for the interested investors. Providing more guarantees to investors, including financial ones. Development of leasing measures in the cases of unique research equipment |
| 3  | External trade measures                             | Formation of the generally favourable macroeconomic climate. Creation of all necessary preconditions for the key producers to become also exporters. Generation of interesting offers for the foreign importers to become investors (thus they may become the co-owners of the import-substituting enterprises) |
| 3.1| Export promotion and implementation of the import substitution strategy |                                                                                   |
| 3.2| Development of internal consumption                 |                                                                                   |
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