The region reproductive potential structure pyramid

Kasim Nazifovach Yusupov, Azat Vazirovich Yangirov, Rustem Rinatovich Akhunov, Yuliya Semyonovna Toktamysheva

Bashkir State University.Validy Str., 32, Ufa, 450076, Republic of Bashkortostan, Russia

Abstract. Based on complex use of resources, developed industry and generic structure, activity of government institutions, peculiarities of market self-development, innovative growth of material costs the potential for multiple increase of the final product of the region and, therefore, of fundamental improvement and use of its reproductive potential are revealed. It is proved that the strategy of increasing the share of final product instead of export of raw materials is the only option for competitiveness of the national and regional economies in international and inter-regional division of labor.
[Yusupov K.N., Yangirov A.V., Akhunov R.R., Toktamysheva Y.S. **The region reproductive potential structure pyramid.** *Life Sci J* 2014;11(12s):403-408] (ISSN:1097-8135). http://www.lifesciencesite.com. 87

Introduction

Reproductive potential of the regional economy is a potential for economic reproduction of the region, laid in: available resources (for example, natural, finance, labor)reached "size" of the region economy (for example, gross regional product (GRP), its sector or generic structure (for example, in the structure of gross value added), characteristic of participation in the interregional and international trade and in the formed model of the regional economy.

In our opinion, it is possible to build a "pyramid" of region reproductive potential and the selection of so-called "primary" elements of reproductive potential serving as a basis of formation of its other elements and "secondary" elements that are direct factors of final results of functioning of the regional economy. That is, there are the underlying elements of reproductive potential, which lie in the basis of the "pyramid", where one type of potential forms another, another one –forms the third, and on the top of the pyramid the final results of the functioning of the economy in the current period are formed.

In the base of the reproductive potential pyramid (on the first level), resources in the classical sense are situated: labor (labor resources), territory (natural and raw material resources) and capital (fixed and revolving funds). We will show it on the example of the products of fuel and energy complex.

Russia is the world's largest producer and exporter of natural gas, second largest oil producer. For example, the European Union (EU), with population of almost one and a half billion is its main consumer. This export, which Russia seeks to increase annually, has become an important source of government revenue and overall gross domestic product (GDP) [1, pp. 171-172].

In 2011 in Russia 509 million tons of oil was produced, 237 million tons was exported. Thus, there was an opportunity to process 272 million tons. If all produced in Russia crude oil were processed, the growth of material costs of their processing would increase by 1.87 times. In this case, the amount of intermediate product (inter-sector balance of the Russian Federation for 2000-2003) would be 1 349 445.9 million rubles instead 721 628.8, and the volume of the final product of oil refining – 782 519.5 million rubles instead of 418 459.6. However, for exporting final product of oil refining, higher price for export of a unit of product is not considered. As a result, the price of the final product is lower than the actual. The reason for this is that 70-80% of all exports are products of fuel and energy complex [2, p.985].

The largest share in the export of goods of all considered levels in 2011 totaled products of fuel and energy complex, for Russia and the Volga Federal district (VFD), this share amounted 73.5% and 67%respectively, and for Republic of Bashkortostan (RB) 84%. Thus, the dependence on world prices and demand for these goods is higher for the Republic compared to the Volga Federal district and the national economy as a whole.

Oil and gas revenues of the Federal budget are formed at the expense of: tax on extraction of minerals in the form of hydrocarbon raw materials (oil, flammable natural gas, gas condensate); export customs duties on crude oil; export customs duties on natural gas; export customs duties on the products of oil refining. From extracted in 2011 crude oil actually 258 million tons entered on processing, of which received 36.8 million tons of motor gasoline, 70.2 million tons of diesel fuel and 72.9 million tons of fuel oil. Got two ratios: 1) 100% of all produced in Russia crude oil 50.7 % came for processing; 2) 100% of the

received oil processing is 14.3 % of motor gasoline, 27.2 % - diesel fuel, 28.3 % of fuel oil and 30.2% other products.

We made the assumption that all of the oil produced in the Republic of Bashkortostan, is processed within the region and will only be exported in the form of oil products. In this case technological consumption of some sector products by others will increase significantly. JSC "Bashneft" exports crude oil and refined products and petrochemical products in 2010 it extracted 14.1 million tons, and in 2011 - 15.1 million tons of oil. In 2011, the company exported 3.6 million tons of oil, which is 12% more than in 2010. In view that 95 % of all oil extracted by JSC "Bashneft" accounts for the Republic of Bashkortostan, weget: in 2010 – 13.4 million tons and in 2011 – 14.3 million tons of oil. Export from the Republic of Bashkortostan amounted in 2010 3.4 million tons and in 2011 – 3.9 million tons. Following the logic of full processing of extracted oil in the region, in the Republic of Bashkortostan in 2010 should be processed 10 million tons of oil (production volume within the Republic minus the volume of oil export from the Republic), and in 2011 – 10.4 million tons.

In addition, an important element of reproductive potential is labor resources. For many decades, many researchers have confirmed the link between the volume of labor resources, their level of education and economic growth. The basic idea is that a well-educated workforce increases productivity, which then increases economic growth [3, p. 781].

The second level consists of: results achieved in previous periods of development of the regional economy, its current sector and generic structure, the degree of participation of the region in inter-regional exchange processes. In previous cycles of reproduction at this level derivative resources has been created that gives the opportunity for subsequent reproduction processes (Fig. 1). These resources can reflect such factors as: the commissioning of fixed assets; investments in fixed capital; the gross regional product, income and expenditures; the amount of exports and imports

Note that no event of an economic nature cannot happen without increasing material costs. In some cases multiple times. Innovation costs just belong to these cases. Therefore, the most important stage of evaluation of efficiency remains correct cost accounting. Taking that into consideration, the most effective way of measuring costs is reduced cost accounting. As noted above, when compared to technical task solutions, technical improvements, various ways of improving product quality and one-time capital investments, comparability with the current costs is achieved by multiplying them on

normative coefficient of investment efficiency. The latter is a minimum level of efficiency of capital investments, below which they, under other equal conditions, inappropriate.
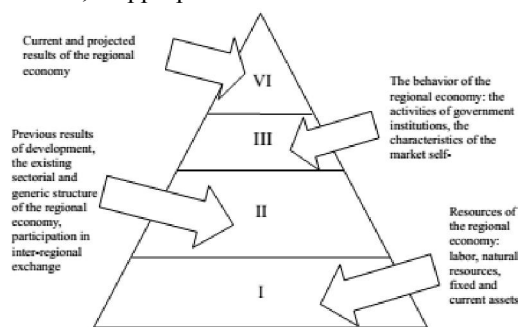
Figure 1. "Pyramid" of reproductive potential of the region.

In practice, the direct calculations based on reduced cost and total reduced cost are difficult. At the same time, information about inter-sector balance (ISB) of production and distribution of the total social product helps with some conditionality to determine the amounts of current (intermediate consumption) and investment (final product) costs. Therefore, the evaluation of the innovation effect with the use of reduced cost we will show on the example of ratio of intermediate and final product (or the same on the basis of the ratio of material costs and net output). These ratios are formed irrespective of whether ISB has been developed in terms of industry sectors or in terms of generic types of economic.

We would show these ratios on the level of the Russian Federation (RF) on economic activities for 2000-2003 (see table 1, 2).

The ratio of average characteristics of technological consumption and end-use of products between the economic activities in the Russian Federation for the period was as 0.717, i.e. 1.394 unit of the final product per unit of material expenses was accounted. This indicates the economic effect presence in the functioning of the national economy of the Russian Federation.

The ratio of the first and last years of the analyzed period amounted 0.690 and 1.450, 0.719 and 1.391 respectively. The values obtained do not confirm in the dynamics the tendency of functioning economy efficiency to increase. It should be noted that huge amounts of raw materials export from Russia are included in the category of the final product, that artificially inflate the share of the final product used in the ratio. Therefore, it is hardly possible to assert an absolute effect in the national economy on the presented values.

Table 1. The average values of intermediate consumption between types of economic activities of Russian Federation in 2000-2003 (million rubles)

| | Industry production | | | | Products and services of agriculture and forestry | Construction | Services | Products of other activities | Intermediate demand |
| | Total | including: | | | | | | | |
		Products of oil production	Oil-refining products	Products of chemistry and petrochemistry					
Industry production	36319 96.4	13083 8.3	4709 94.3	279872.1	19969 5.1	570968	16148 15.7	2895 7.8	604643 3
Including: Products of oil production	46773 1.2	18755 .8	4282 91.7	16992	0.2	61.5	84493 .3	0	472758 .9
Products of oil refinement	26909 5.9	30345 .9	1403 7.7	13140.1	48622	72876.9	32940 2	1632	721628 .8
Products of chemistry and petrochemistry	28302 3.6	16680 .8	2122.7	128160.2	19516 .4	30332.4	15740 6.6	594.4	490873 .4
Products and services of agriculture and forestry	29799 1.8	133.8	102.8	434	23632 8	2.6	58377 .2	0.2	592699 8
Construction	10889 0.1	26304 .5	4435.1	7439.6	5071.6	6328.5	13054 .2	262.6	251098 .8
Services	33015 5.5	62902 .7	7487.6	20939.9	20185	57729.4	13244 .7	8903	174137 6.1
Products of other activities	25115 .7	3559.8	996.1	1928.4	727	5741.9	81979 .9	4487 .8	118052 .4
Total on national economy	43941 49.5	22373 9.1	4840 15.9	310613.8	46200 6.7	640770 .4	32101 21.1	4261 2.4	874966 0.1

Source: calculated by the authors by the data of [4]

Table 2. The average values of end-use of products between types of economic activities in the Russian Federation for 2000-2003 (million rubles)

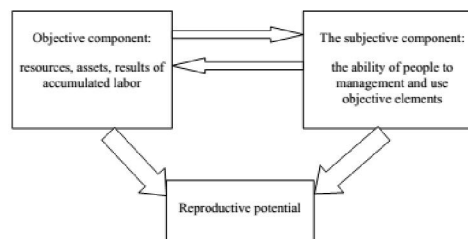| | The end-use expenditure of: | | | Gross fixed capital | Change of inventories amount | Net acquisition of valuables | Export | Total on final production |
	Households	State institutions	Non-profit institutions producing services for households					
Industry production:	314300 9.2	9021.5	0	56577 1.0	180291 .5	5275.5	33354 46.0	723881 4.7
Including: Products of oil production	0	0	0	0	226.5	0	88505 4.1	885280.6
Products of oil refinement	62060.5	183.5	0	0	373.6	0	35584 2.0	418459.6
Products of chemistry and petrochemistry	152574.6	3661.8	0	0	12067.5	0	22097 6.9	389280.7
Products and services of agriculture and forestry	526335.9	12311.9	0	-34.9	45468.9	0	28599.4	612681.4
Construction	27933.9	0	0	11520 77.9		0	32038.1	121204 9.9
Services	100226 0.1	167973 7.7	108699 .3	68873.4	0	0	22393 5.8	308350 6.3
Products of other activities	32197.4	0	0	2 640.2	602.6	0	13 362 .4	48 802.6
Total on national economy	473173 6.5	170107 1.1	108699 .3	17893 27.6	226363 .0	5275.5	36333 81.9	121958 54.9

Source: calculated by the authors by the data of [4]

The proportions of consumption of oil products for technological purposes and the purposes of final consumption are given below. The proportion of consumption of oil products in other economic activities according to the averaged values of intermediate consumption between types of economic activities of Russia in 2000-2003 (million rubles).

Reproductive potential gives an opportunity to describe the ratio of intermediate and final product using the characteristics of actually developed inter-

sectorial balances (ISB) of production and distribution of the total social product of Bashkir ASSR for 1966, 1972, 1977, 1982. The ratio of the average material costs and the final product for this period amounted 0.731 and 1.369, i.e. there was approximately the same ratio in the Republic and the country as a whole. This situation can be explained by the fact that the potential of Bashkir ASSR – Republic of Bashkortostan is traditionally high with close international and interregional relations. Therefore, the Republic's economy to some extent repeats the status and trends across the country.

If the first two levels reflect mostly the objective components of reproductive potential, the next level is intended to reflect the subjective characteristic of it. The subjective component of reproductive potential is the ability of people to manage the elements of the objective component. The objective component is the regional resources and assets. Subjectivity is largely reflected in the assessment of the reproductive potential, which is determined not only by the completeness of the available information, but also by the approach of management subject to reproductive potential. As a result, a subjective potential is not a constant. Its size and boundaries are in constant motion. Thus, the structure of regional reproductive potential can be represented in the form of the following scheme (Fig. 2).

Objective component: resources, assets, results of accumulated labor — The subjective component: the ability of people to management and use objective elements — Reproductive potential

Figure 2. Formation of the reproductive potential of the regional economy.

I.e., building of the reproductive capacity is possible by either the objective or subjective component. Adding subjective component to the resource, in our opinion, leads to conversion of resource to potential. Thus the third level of the pyramid is the behavioral pattern of the regional economy, which includes the activities of the governmental institutions (at the regional and federal levels) and peculiarities of the regional market self-development (the region's susceptibility to the reforms, the activity of small business, innovation activity, the degree of response to various forms of influence, for example, by infusion of federal funds, the introduction of incentives, encouraging innovation).

The role of public authorities in achieving economic development of a region or country is quite

significant. Study of the influence of economic policy in Europe on economic growth [5, pp. 230-232] gives the following results: growth of 0.6 percentage points per year in the measurement using non-parametric model, approximately 0.9 percentage points when using parametric model. These results are repeating in series of checks.

In most cases, to determine the most developed and competitive region with great potential for the introduction of a new object of production, innovation or investment, ratings are used. They are used by investors, entrepreneurs, state authorities in many areas of economic activity. Most of the economic phenomena and processes are multifactorial that gives the basic for rating method. For the ranking of regions by the level of efficiency of the use and implementation of innovations, we applied the method based on analysis of the six factors, combined into two groups [6]:

1. Factors describing the degree of regional response to innovative activity: labor productivity, capital productivity, environmental friendliness of production.

2. Factors of innovative activity: expenditures for research and development per employee; expenditures on technological innovations per employee; output of innovative production per capita.

For each of the factors was determined the leading region, the value of which was taken as 100%. The values of other regions was calculated in percentage using the following formula:

$$S_i = \left(\frac{X_i}{X^{max}}\right) * 100\% \qquad (1)$$

i–region number, X_i–parameter value for the development of i-region; X^{max}–the maximum value of the parameter for the leading region; S_i–percentage of the value of the parameter of i-region to the leading region [6].

We obtain a series of data provided to the database (leading regions). The six parameters by mathematical calculations are formed first in two (response to innovative activity and innovative activity, as average arithmetic from their composite parameters) and then – into a single one. This single number will be used eventually for the assessment of innovative development of the region

After the calculations, each region will get a certain rating value in the interval 0% -100% (from A++ to D). The higher VA value – the higher place of region in the innovative development rating. Our calculations demonstrated substantial leadership of Moscow in the rating. In our opinion, it is due to good value of all six parameters of this region; however, it is not the leader in all of them. To identify the advantages of this or that region for a particular factor of innovative development, we have designed table 4.

Thus, from year to year oil-producing regions of Russia and the country's capital are the leaders in labor productivity and capital productivity. Large scientific work is also held only in three "capital" subjects of the Russian Federation: Moscow, St. Petersburg and Moscow region.

Table 3. The most developed regions in terms of regional response to innovative activity and of innovative activity

	Factors of regional response to innovation activity	Factors of regional innovative activity
2000	Moscow, Nenets Autonomous region, Khanty-Mansi Autonomous region, Yamal-Nenets Autonomous region, Tyumen region	Moscow, Samara region, Komi Republic, St. Petersburg, Republic of Sakha (Yakutia)
2006	Moscow, Nenets Autonomous region, Khanty-Mansi Autonomous region, Republic of Khakassia, Tyumen region	Samara region, Republic of Tatarstan, Moscow, Khanty-MansiAutonomousregion, St. Petersburg
2011	Republic of Ingushetia, Nenets Autonomous region, Moscow, St. Petersburg, Sakhalin region	Sakhalin region, Moscow, St. Petersburg, Nizhny Novgorod and Lipetsk region

Source: designed by the authors

The reason for these high values for Moscow and St. Petersburg is the location of largest higher educational institutions in the country (as well as implementation of "Skolkovo" project in Moscow, 2010) and the largest in Russia scientific and technical complex is in the Moscow region. Samara region can be attributed to innovative active regions. Annual changes of leaders are more intensive in terms of expenditure on technological innovation and production of innovative goods and services. At the same time, these parameters directly reflect the innovative way of region development.

There are many examples where the big profits are able to get those companies that have control over a significant portion of valuable natural resources. Uneven distribution of the cost of these resources is an element of social injustice that leads to poverty of certain regions [7, pp. 1044-1045].

The rating gives opportunity to determine the attractiveness of a region for investors, entrepreneurs, etc. Thus, according to our calculations, Moscow, the most developed region from 2000 to 2011 raised its share in the total volume of GRP regions of the RF subjects from 20% to 22.5% and the number of employed in the economy – from 7.8% to 9.24% of the total employed population. At the same time, many regions of Russia received letter code D during the observed period. For this reason, in our view, it is important to study the parameters of D index regions separately from other regions of Russia. We have included in this group regions obtained index D only once too, as it indicates that they are unstable at crises and can get to the D category in future. This group includes 47 of 83 regions of the country, having 40-41% of the total employed population of the Russian Federation, have generated from 27.6% of the total GRP in 2000 to 25.5% in 2011 (gradual reduction in output at existing costs of innovation has taken

place).The remaining 35 regions having low level rating index (C, C +, C ++), but not received a failing grade (D), having 50-51% of the total employed population, have produced 51-52.5% of total country GRP. Such high number of regions with C and D index reflecting the very low level of innovative activity and response to it is and a considerable underdevelopment in compare with regional leader (Moscow).This underdevelopment of2000 and 2003 has decreased in 2006. The consequences of the global financial and economic crisis of 2008-2009 led to the fact that more than half of the regions had index D for 2009. But in 2011 there were only six regions with unsatisfactory level of innovative development.

The second and third levels of the regional economy characterize the ability of the regional economy to implement and commercialize the resources available at the first level. Finally, at the top of the "pyramid" (the fourth level) must be the current and expected development of the regional economy. For example, these are the quantitative and structural characteristics of the gross regional product, and ultimately, the level and quality of life.

If we take as an example the current policy of China, it will soon cease to be the so-called "factory of the world" it has become, due to the abundance of cheap labor. Simultaneously with the increase in the number of graduates, the key driver for further development is the increase in government spending on science and technology that will help to develop competitive business services and integrated production technologies. It seems that China will become innovation-oriented economy by 2020 [8, pp. 123-124].

Comparing the proportion of increased volumes of refined products, we obtain the amount of different produced goods. Then, knowing the price per ton of each oil product, we define increased volumes of final product. Thus, to assess the assumptions under which all oil produced in Russia is completely processed, it is necessary to adjust cost value of oil production to prices on oil products. In 2012 crude oil cost 10,360 rubles per ton, motorgasolineofallbrands– 19,094 rubles per ton in average, dieselfuel–22,637 rubles per ton in average. The main result of innovation in oil refining should be increase in depth of oil refining, which will improve process efficiency throughout the industry. This, in turn, is a source of increasing the proportion of final product per unit of intermediate in economy as a whole, that we can define by the ISB system of tables. If the processing depth reached its maximum – more than 95%, there would be the possibility to export mainly gasoline and diesel fuel due to the sharp reduction of fuel oil. At the present time the last owns the largest share. Gasoline and diesel fuel are about 2 times more expensive than

crude oil and even more than fuel oil. This approach allows to obtain 1770108.2 million rubles from the export of petroleum products instead 885054.1 million rubles from export of crude oil. Taking into account the amount of the actual volume of exports of products of oil refining at the modern stage and the results of our calculations, the total amount of export of oil products would reach 2125950.2 million rubles. Therefore, considering the total amount of intermediate consumption (amount of intermediate product at full processing of oil will be 1349445.9 million rubles instead 721628.8), household consumption, government, consumption of non-profit organizations, stockpiling and export would be 5442067.7 million rubles.

These were parameters of oil refining activity. If we take the national economy in general, there would be the following picture: intermediate consumption would be 9377477.2 million rubles, and the final product – 14984963 million rubles. Thus, even as a result of partial measures on modernization of economic activities, the ratio of intermediate and final products would change from 1.394 to 1.598 in favor of the final product.

Having determined the proportion of oil products consumption by other economic activities, it is possible to calculate the quantity of intermediate and final consumption. In this case, oil refining will grow (by data for 2011) 1.4 times. Extraction costs per ton of oil in 2012in Republic of Bashkortostan was 5829.9 rubles, motor gasoline – 15476.0 rubles and diesel fuel – 13532.0 rubles Last two products 2.1 times more expensive than crude oil in average. That was correct for Russia as a whole. It means that efficiency parameters of the region with oil production specialization coincide with parameters of the whole country in the result of actions on implementation of achievements of scientific and technical progress in the direction of the change in the ratio of intermediate and final products. A contributing factor to achieve these results, in addition to innovation, is the attraction of investments, their effective usage is very important. Investment attractiveness and activity are the key elements.

Investment attractiveness is the state of organization, which is rated as promising economically sustainable, with considerable financial potential in the long term, the activation of which can bring benefits to investing person. Investment activity of the organization is a characteristic of the organization, which suggests that the business entity is not only economically sustainable, with significant development potential, but also owns a significant amount of available funds invested effectively [9, p. 1105].

Conclusions

Thus, the resources that are located on the first level, having repeatedly refracted through higher levels, are projected in the specific form on the final results of functioning of the regional economy. We believe, that evaluation of the reproductive potential of the region is impossible to the full extent, as it is presented by very diverse components that are measured in incomparable units or not measurable at all and due to significant influence of subjective component and multiplicity of its use. So you can more or less reliably evaluate only its separate sides. For example, you can measure the volume of available resources, without regard to their quality and usage patterns.

We believe that the reproductive potential of a certain degree can be described by gross regional product and investments in fixed capital. Quite informative indicator of the ability, the capacity of the region to sustainable reproduction is, in our opinion, the growth of identified parameters in the crisis period, for example, 2009can be taken as one of the last. Therefore, it is necessary in their analysis to cover as long period as it possible and try to bring some average values over several years to make these values free from random fluctuations. It seems, that or accounting of GRP or investments per capita in each region for each year (for example, over the past 10 years) to country average values, and then calculating an average of the coefficients obtained for a number of years is the most appropriate.

When calculating correlation coefficients for indicators of investment in fixed assets in percentage to the previous year (growth), and the growth rate of GDP for 2006-2010, Fechner correlation coefficient is equal to 1 and the correlation coefficient of Spearman ranks–to 0,94. I.e. there is a direct and close connection [10, p. 27]. Also total reproductive potential of the regions can be conditionally defined "by size", i.e. large and small regions. For example, we can offer to take some integral specific weight of the region in the national economy, which can be calculated as an average value from particular weights in the all-Russia indicators of some absolute parameters. Such parameters can be: the number of enterprises and organizations, the cost of fixed assets, the number of economically active population, gross regional product, investment in fixed assets.

To the received integral value of the specific weight, we have applied the following scale with application of the criterion: if all regions had made the same contribution to the national economy, this contribution would be about 1.2%. If the region has a specific weight two times more of this standard (i.e. 2.4% and above), then it can be considered as having large (in absolute terms) reproductive potential. The remaining interval from 0% to 2.4% is divided into four roughly equal groups. The group of regions with a result from 1.8% to 2.39% – have above average "size" of reproductive potential. From 1.2% to 1.79% – "average" regions. From 0.6% to 1.19% –regions with absolute "size" of the potential below average. From 0% to 0.59% – "small" regions.

Thus, only a systematic approach with consideration of relations of the resources and the results will allow us to get the most complete study of the reproductive potential of the region.

Acknowledgement

Corresponding Author:
Dr. Yusupov Kasim Nazifovach
Bashkir State University.Validy Str., 32, Ufa, 450076, Republic of Bashkortostan

References
1. Gawdat Bahgat, 2010. Russia's oil and gas policy. OPEC Energy Review, 3-4(34): 162-183.
2. Regions of Russia. Social-Economics Parameters, 2012. 2012: Statistics. Rosstat. Moscow, pp: 990.
3. Heather, V. S., D. P. Mark and A. Faggian, 2013. Innovation, Entrepreneurship and Economic Growth in Lagging Regions. Journal of Regional Science, 5 (53): 778-812.
4. National accounts. Official site of the Federal service of state statistics of Russian Federation (Rosstat). Date Views 07.05.2014 www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/accounts/.
5. Pellegrini, G., F. Terribile, O. Tarola, T. Muccigrosso and F. Busillo, 2013. Measuring the effects of European Regional Policy oneconomic growth: A regression discontinuity approach. Papers in Regional Science, 1(92): 217-233.
6. Gusev, A. B. Ratings of Innovative Development of Regions of Russia. Federal on-line magazine "The Capital of the Country". Date Views 07.05.2014 www.kapital-rus.ru/index.php/articles/article/2574.
7. Pullen, J., 2013. An Essay on Distributive Justice and the Equal Ownership of Natural Resources. American Journal of Economics and Sociology, 5(72): 1044-1074.
8. Mishra, V. and R. Smyth, 2014. Technological Change and Wages in China: Evidence from Matched Employer–Employee Data. Review of Development Economics, 1(18): 123-138.
9. Salyahova, E.A., 2013. The Investment Activity Organization: the Peculiarity of Analysis and Management. Bulletin of Bashkir University, 4(18): 1105-1109.
10. Yusupov, K., A. Yangirov and Yu. Toktamysheva, 2012. Evaluation of Macroeconomic Indicators which Reflect Objectives of National Economy in the early XXI Century. Economics and Management, 3: 23-28.

7/22/2014