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FEATURES AND PROBLEMS OF USING GROSS REGIONAL PRODUCT AS AN INTEGRAL INDICATOR OF ECONOMIC DEVELOPMENT

Ekaterina N. Voronchikhina, Teaching Fellow, Department of the World and Regional Economy, Economic Theory, Perm State National Research University <envoronchikhina@gmail.com>

ORCID ID: 0000-0001-7033-5832
JEL Code R11

ОСОБЕННОСТИ И ПРОБЛЕМЫ ИСПОЛЬЗОВАНИЯ ВАЛОВОГО РЕГИОНАЛЬНОГО ПРОДУКТА КАК ИНТЕГРАЛЬНОГО ПОКАЗАТЕЛЯ ЭКОНОМИЧЕСКОГО РАЗВИТИЯ

Ворончихина Екатерина Николаевна, ассистент кафедры мировой и региональной экономики, экономической теории, ФГБОУ ВО «Пермский государственный национальный исследовательский университет», Россия <envoronchikhina@gmail.com>

Abstract

Gross regional product (GDP) is a comprehensive indicator of regional economy development showing quantitative results and peculiarities of local social economic processes in the region. However, the application of this indicator triggers a number of methodological challenges which should be successfully faced and should determine the reliability of the obtained results, as well as the appropriate nature of the solutions for the development planning issues in the regional economy.

The paper provides the Perm Krai GRP estimates with the expenditure method, it is compared with gross value added (GVA), a significant statistic difference in GRP indicators estimated with two methods is shown. Problems arisen at carrying out the estimates at the regional level, including partial account for the inter-regional relationships are identified. Types of economic activities with their GVA amount not being distributed among the country's regions are described.

Therefore, a number of tasks for the regional statistics bodies are defined to obtain more accurate statistic data.

Keywords: regional economy, gross regional product, value added, expenditure method, manufacturing method of collective non-market services, import and export of goods, the net import tax.

Аннотация

Интегральным показателем развития региональной экономики, отражающим количественные результаты и специфику локальных социально-экономических процессов региона, является валовой региональный продукт (ВРП). Использование данного показателя в этом качестве порождает целый ряд методических проблем, успешное решение которых во многом будет определять уровень достоверности оценки полученных результатов, а также корректность решения вопросов планирования развития региональной экономики.

В статье представлен расчет ВРП Пермского края методом конечного использования, приведено сравнение с валовой добавленной стоимостью (ВДС), показано значительное статистическое расхождение показателей ВРП, рассчитанных двумя методами. Выделены проблемы, возникающие при проведении расчетов на региональном уровне, в том числе неполное отражение на региональном уровне межрегиональных связей. Показаны виды экономической деятельности, значимый объем ВДС которых не распределяется между регионами страны.

Сформулирован ряд задач для региональных органов статистики с целью получения наиболее точных статистических данных.

Ключевые слова: региональная экономика, валовой региональный продукт, добавленная стоимость, метод конечного использования, производственный метод, коллективные нерыночные услуги, ввоз и вывоз товаров, чистый налог на импорт.

Introduction

Transformations in economy at the end of the 1980s - the beginning of the 1990s primarily led authorities to reconsider the key indicators for the evaluation of the economic growth in the country and in some regions. A state-run economy prioritized towards manufacturing industries, while the other activities were excluded from the manufacturing area. Consequently, gross national product and national income estimated by the manufacturing industries only (manufacturing, construction, agriculture, lorries, manufacturing communication, resource supply and other manufacturing industries) turned out to be the key macroeconomic indicators in the methodology of the economy balance [1].

In recent decades, the countries with the market economy have abundantly applied another methodology of statistical accounting - national accounts system, which presupposes that any activity in goods and services refers to a manufacturing activity and is accounted for in the key macroeconomic indicators [2], with the main one being the gross domestic product (GDP). Gross regional product (GRP) is a generalizing indicator of the RF subjects development. In Russia, a shift to a new methodology of statistical accounting was accompanied with a shift to the market relations. This methodology is being improved, although there are a number of serious challenges with adequate statistic representation of particular phenomena and processes.

Dynamics and structure of GDP and GRP are the key indicators at strategic planning in Russia on the whole and its subjects in particular. These indicators are used to distribute inter-budgeted transfers and to arrive at other solutions with their significant impact on the social economic development of the country and its regions [3, 4]. Therefore, the reliability of the GDP and GRP estimates is critical for implementation and success of the GDP- and GRP-based economic solutions. That is why the paper is relevant.

Methodological problems of GRP calculation

GDP can be estimated with three methods: manufacturing, profit-based and expenditure-based, while presently GRP is estimated with one method only - a manufacturing one. This method is limited in checking the reliability of this indicator estimates.

Let us analyze a significant statistical difference in GRP indicators estimated with a manufacturing method and with the expenditure method for Perm Krai.

Perm Krai Regional Office of the Federal State Statistics Service defines GRP as value added sums of Perm Krai residents. Residents of the regional economy are all companies, quasi companies or households with a commercial interest in our region.

The author applies the expenditure method to estimate GRP by summing the final consumption expenditures of the households, the final consumption expenditures of the state management, gross savings and exports [5].

Table 1 shows the GRP estimates made by Perm Statistics Service by added costs and the GRP estimates made by the author with the expenditure method [6, p. 93].

Table 1 – GRP dynamics in Perm Krai in current prices (mln rubl)

Indicator	2001	2005	2008	2009	2012	2013	2014	2015
Value added GRP (gross value added - GVA)	166803	327273	607363	539831	860343	880264	974193	1048019

Expenditure-based GRP, including:	200681	370615	803272	740735	1134263	1252987	1339213	1031572
household final consumption expenditure	73237	173835	358160	380710	532153	596838	634126	625826
state management final consumption expenditure	20502	47722	81158	96709	128590	161064	177574	165716
gross savings	42712	58607	152363	135681	163837	226318	214613	240030
Net export	64229	90451	211591	127635	309683	268767	312900	-
Statistical difference, %	20,3	13,2	32,3	37,2	31,8	42,3	37,5	-

Specificity of accounting for individual GRP elements

Table 1 shows considerable statistic difference between GRP indicators estimated with two methods, which can be explained by partial account for the inter-regional connections at the regional level [7]. Therefore, let us define the problems occurred in carrying out the estimates at the regional level.

Calculations of a macroeconomic indicator at the regional level allows for some simplifications, which are very significant for the country's regions, including Perm Krai. GRP estimates do not account for some elements which are included in GDP, so a total GRP of all regions in Russia is less than country's GDP [8]. These elements are as follows [9]:

1. added value for the industries with corporate non-marketed services provided for a community on the whole (state management, military protection, international activities, etc.);
2. added value for the services of financial intermediaries (including banks) with their activities being limited by the regions [10];
3. added value for the foreign trade services which are mainly provided at the national level;
4. some taxes (import and export taxes, in particular) which are not included into the estimates at the regional level.

Some activities, including activities in the areas of finance and state management, are not included into GVA of Perm Krai, therefore, this GVA is likely to be undervalued.

The specified problems are mainly practice based rather than theory based. What is more, regions' economies are more closely intertwined than the countries' economies; their goods and service flows are very intense.

This results in the fact that the production of goods and services, incomes are less connected with their usage in a particular region than in the country on the whole; to match the data about resources and their usage, one should have the information concerning the abovementioned components which the regional level lacks (in contrast to the national level) [11].

For example, a significant GVA amount is not distributed among the country's regions in all types of economic activities (Table 2) [6, p. 94].

Table 2 – GVA share not distributed among Russia's regions in some economic activities in the overall GVA amount in Russia (%)

Russian Classification of Economic Activities	2010	2011	2012	2013
Section F Construction	-0,5	9,7	11,6	7,4
Section G Wholesale and retail outlets; repair works of vehicles, motorbikes, household goods and personal appliances	8,8	3,4	7,6	8,1

Section H Hotels and restaurants	6,5	2,8	5,6	6,7
Section J Financial activity	87,2	86,1	87,4	91,7
Section K Real estate transactions, rent and services	12,3	8,5	5,8	13,1
Section L State management and military security provision; social insurance	22,2	20,2	16,9	21,4
Section O Other utility, social and personal services	24,7	19,8	17,6	19,5
TOTAL	5,9	4,9	5,8	5,1

Concerning the first component – corporate non-marketed services – which is excluded from GVA estimates – it is important to emphasize that this indicator should be included into the estimates of the region where these services are provided, and the value should be added into GRP amount of this region. However, in practice some national expenses are not distributed among separate regions, which can mainly be explained by the fact that it is impossible to define the region these expenditures refer to (for example, expenditures on the international cooperation, public debt management), as well as by the drawbacks in financial accounting or by the political background (military expenses, expenses on Internal Affairs Department, etc.).

The same is true about the goods export and import records. It is quite difficult to track the distribution of the products manufactured by a firm in Perm Krai. More than that, actual statistics show the most popular goods in terms of goods import-export. For example, gas turbine combustion engines which are delivered in huge amount outside Perm Krai are not accounted for, which makes it impossible to have reliable estimates.

Some difficulties arise in reporting on import taxes. In our context the indicator can be estimated at the level of the economy on the whole, with no regional division. It is nearly impossible to identify the territorial structure of the taxes, import subsidies since there is no information about territory distribution of goods import [12].

A lack of possibility to collect the required information to estimate GRP results in the following challenges. The manufacturing indicators in the regions are given for residential units, while the indicators of final consumption expenditure at the regional level can not be estimated for the residents. Final consumption expenditure in the region is given in both residential and non-residential units. Hence, we are talking about the population' expenditure in a particular region rather than about residential population’s expenditure in a region. This determines some differences between the manufacturing and usage indicators. At the national level this difference is eliminated by some adjustments made for the Russia's residents abroad minus non-residents' consumption in Russia (these data are shown in payment balance). No payment balance is provided at the regional level, therefore, no adjustments are made.

These factors affect GRP balance which is estimated with the manufacturing and expenditure methods.

Besides, even these inaccurate data are placed on the website of the Federal State Statistics with a 1.5 year delay. So, with these factors in mind, GRP value is approximately estimated with the results of the events which are long gone.

Conclusion

Thus, since it is impossible to work out reliable and accurate expenditure-based GRP indicators, then we consider the estimates done for the regional analogue of GDP with the expenditure method and its correlation with GVA to find statistical difference to be inappropriate.

Moreover, GRP estimate problem refers to the insufficient precision in indicator estimate methodology at the regional level in Russia, the same concerns the indicator of the monetary incomes, population expenditures and other macroeconomic indicators which are important for the economic development level and population's standard of living.

The specified problems define a number of tasks for the regional statistics bodies to obtain more accurate statistic data:

1) to develop an easy-to-use GRP estimate methodology based on the alternative information sources (for example, based on the data from tax statistics).

2) to analyze the components of the net GRP application, including the net export indicator together with GRP estimated with the manufacturing method.

3) to use a try-and-see method to adjust the existing indicators and the work out the missing indicators to increase the reliability and accuracy.

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