

Macro-Level Measurement of the Volume of Non-Observed Economy

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Introduction

Goskomstat of Russia has been measuring the non-observed economy since 1993. The problem of the estimation of non-observed economy volumes is extremely important since the scope of this phenomenon began to rise fast and reached rather essential size after the liberalization of economy: NOE adjustments have lately been estimated as approximately 22-25% of GDP in Russia. These significant sizes of the phenomenon are first of all caused by:

absence of the integrated database, which would comprehensively characterize industrial development;

absence of many classifications recommended by SNA-93: the existing classifications are not focused on market economy in some types of economic activities and production, therefore an incorrect estimation of output of industrial production could occur;

permanent institutional reorganization, especially in new industries (for example, in General commercial activities maintaining market; Operations with real estate) and small enterprises;

the interaction with tax bodies is not appropriately established; to certain extent the interdepartmental information exchange with administrative bodies is limited due to absence of the Statistical Law;

Most important terms of improving the information system about economic activities of institutional units include upgrading of accountancy reporting; the process of improving

and harmonizing bookkeeping reports presently is gone. This undoubtedly should promote most entire use of accountancy reporting for SNA indicators building. However the growth rates of introduction of international standards to accounting practice are still obviously insufficient.

One of natural features of transition process from totalitarian planning management to market economy is the priority development of practice of transformations in comparison with formation of mechanisms of its regulation, including legislative level. The system of rules of economic activities and tools for its implementation developed step by step, and alongside with immoderate tax burden and unfavorable investment climate, encourage the enterprises to get “shadowy”. Therefore the goal of statistics is to provide accounting of the economic phenomena and events, which are not accessible for direct registration.

Goskomstat of Russia pays special attention to development of such activities. National accountants have acted as initiators and subsequently as coordinators of measurement of non-observed economy in Russia.

At present under calculation of macroeconomic indicators Goskomstat of Russia takes into account activities that are non-registered by statistical recording and are quite legal, but intentionally underestimated by manufacturers or not registered by statistical bodies as informally organized units. The illegal economic activities are not taken into account up till now.

Non-observed economy adjustments are computed for all parameters reflecting all sides of reproduction: output, revenues, consumption, accumulation, export, import. Approaches for non-observed economy adjustments were developed most carefully in assessing production area. Adjusting is a three-stage procedure, while:

- calculating output by industry;
- linking (balancing) parameters of key account;
- building Input-Output symmetry tables.

All the variety of non-observed economy adjustments in Russian statistics generally bases on the balancing approach.

Comparison of estimations based on resources and on consumption is a core of Goskomstat of Russia of indirect estimations concept used in measuring parameters in different statistical

areas. For example, the latent remunerations (accounting for up to 10% of GDP in Russia) are measured by comparing officially declared remunerations to the household expenditures. Volumes of investments in fixed assets are measured taking into account their actual dynamics rates that, in turn, are related to production rates of building materials and construction activities. Additional adjustments on non-registered import are checked in balance of production and Gross domestic product consumption.

Role of Input-Output tables (Inter-industry balancing) for measurement of non-observed economy

The construction of Input-Output tables allows revealing the certain disproportions between production and consumption in specific groups of commodities and services. The necessary adjustments are introduced on the basis of analysis of output, import, and intermediate and final consumption parameters.

Balance design at the level of specific groups of commodities and services allows adjusting parameters of production and consumption of national resources. In building Input-Output tables most significant adjustments are made for volumes of intermediary activities, transport extra charge, production petroleum and related products, gas, electric power. At calculating volumes of intermediary activities and transport extra charge specific attention is paid to difference between consumer prices and producers prices by types of products and also specific procedures of commodity movements from producers to purchasers is also taken into consideration. Prompt decentralization of all the mechanisms of macroeconomic ruling, top-speed denationalization of public sector of economy, when production monopolization is still under way, have provided favorable conditions for free pricing and establishing a number of intermediary structures. In some commodity groups up to 30 intermediary structures are involved in process of commodity movements. When cash is in deficit and non-payments are rising for production area, barter deals, payments in foreign currency and tax benefits have become widespread. The unprecedented fast growth of the share of financial intermediary services in gross domestic product is caused by weak development of this sector in the Soviet economy as well as by most favorable opportunities to evade the governmental and business partners' control in comparison with manufacturing

sector. These circumstances have led to the assets' underreporting growth or underestimations of financial and economic accountability at the stage of production maintenance and commodity promotion while the volumes of hidden production directly in production sector are not so considerable.

Following building of input-output tables the needed adjustments are computed for national accounts parameters. So, for example, at linking of input-output tables for year 1995 it was found out that the enterprises record much more volumes of gas and electric power consumption in comparison with production in this area reported by producers. It allowed adjusting output of gas industry by 17%, output of pipeline transport - by 12%. The difference in electric power data was referred to "general commercial activities maintaining the market" industry.

Application of the "Italian" method

Technique of calculation of non-observed economy parameters used by the Italian experts was approbated in Goskomstat of Russia in 1999. Aimed at obtaining the needed data two sample surveys were conducted in Bryansk territorial district. These were sample surveys of households in respect of employment and output of economic activities of small enterprises. Basing both on the data obtained at surveys and information of regular observation on large and medium enterprises there were defined the total labor inputs for production and output by industries. It allowed calculating outputs for five basic sectors (industry, agriculture, transport, construction and trade) of Bryansk district.

At the first stage the number of employees on the enterprises and in organizations (according to results of survey of households on employment matter) was compared to the number of workers on the enterprises and in organizations (basing on current reporting) for all sectors. In the further calculation there were used data that had maximum, logically justified value.

At the second stage the number was distributed to large, medium and small enterprises proportionally by data of the current reporting.

Then total number was grouped by all employed categories: at the enterprises and in organizations, in a farm, in entrepreneurship without legal entity formation, on an individual basis, hired by natural persons.

For calculating volume of produce by small enterprises and self-employees there were used the outputs by small enterprises, for large and medium enterprises - the outputs by large and medium enterprises.

The obtained results were compared to the volumes of production calculated by existing in Goskomstat of Russia methods (methods for estimation of output in trade and agriculture are described above).

#	Sectors	Output (calculated on the basis of survey results)	Output (calculated on the basis of existing methodology)	Ratio
A	B	1	2	$3=2/1*100$
1.	Industry	1538,6	1543,6	100,3
2.	Agriculture	338,5	596,2	176,1
3.	Construction	276,1	368,3	133,4
4.	Transport	510,7	667,9	130,8
5.	Trade	383,5	423,0	110,3

The analysis of divergences between the obtained results and volumes of production calculated on the basis of existing methods has shown that they substantially are caused by distinctions in methodological sense of an estimated parameter. For example, production manufactured by households for own consumption is not included in the volume of production of agriculture and construction computed on the basis of survey results. According to the GDP calculation method output by Transport sector is adjusted for hidden and informal activities on Federal level and then is distributed by regions proportionally to the value added produced. It could deform the real state of affairs. Estimation of volume of

production in trade on the basis of survey implies using the same sampling data for enterprises and natural persons what is not quite correct. Unification of calculations by output parameters, namely, including of goods produced by own forces for consumption inside households within the output of agriculture and construction, and also computing necessary adjustments for production of nature persons engaged in trade activities essentially pulled the obtained results together.

For more detailed examination of the methodology under investigation there were calculated volumes of production for 13 sectors of economy for 1997 in Tatarstan Republic.

The analysis of the results obtained in Tatarstan Republic confirmed the assumptions arisen from comparisons of volumes of production calculated in Bryansk area using two methods.

As a result it was confirmed that this method of calculation of non-observed economy parameters provides an adequate estimation of volumes of production for the basic sectors of economy taking into account adjustments that linked to specific features of productions in some sectors of economy (agriculture, construction, trade).

Alongside with some advantages of this method concerning calculation of volumes of production for self-employees, its use for calculation of volumes of production at the enterprises has lacks in condition of Russia economy. Conducted survey once again confirmed that Russian entrepreneurs underreport either output or number of workers in fact for tax evasion. It is characteristic both for small and for the large enterprises, and also for banks. The carried out calculations once more drew attention to the problems of measurement of production per worker. When calculating this indicator there is a discrepancy between the output and the number of workers produced it.

The further updating of estimation of shadow economy parameters

With the purposes of getting additional information about prevalence of shadow economy by Russian regions and about size of shadow economy by sectors there was conducted a work to research new methodological approaches in cooperation with experts from other economic authorities. Within the framework of this work the organization of sample questioning of officials from tax bodies, economic departments of regional authorities, auditors, directors of the enterprises, personnel agencies was proposed with the purposes of

getting quantitative estimation of shadow economy for various sectors of economy. The sizes of intentional income concealments is supposed to be estimated basing on the analysis of the worked out expert estimations. The comparison of these data with results of audits conducted by tax police should allow drawing more objective conclusions.

At present due to specific circumstances Goskomstat of Russia measures latent remuneration only at the federal level. To spread it to the Federation subjects the Center of Economic Analysis developed on Goskomstat commission special methodology for measuring latent remuneration by sectors.

The basis of the proposed circuit to calculate the latent remuneration in certain regions is an assumption about a significant disproportionate development of areas of economy as latent remuneration generators in some Russian regions. The following factors determining interregional differences in latent remuneration spread were highlighted:

1. intensity of entrepreneurial activities
2. intensity of small business growth
3. intensity of financial sector growth
4. intensity of foreign economic relations
5. intensity of growth of non-registered retail trade
6. intensity of dollarization of regional economies.

In essence the methodology first estimates one-factor “quotas” in all-Russian quantitative characteristics of latent remuneration spread. On the basis of preliminary estimated one-factor “quotas” the regional multi-factor “quotas” in all-Russian quantitative characteristics are computed of latent remuneration spread. Using the multi-factor “quotas” and all-Russian volumes of latent remuneration derived for federal level the regional volumes of latent remuneration are estimated. Thus, “quota” of region in all-Russian quantitative characteristics of latent remuneration is read as integrated (multi-factor) assessment certain region’s “contribution” to the national volume of latent remuneration.

To check this method Goskomstat of Russia made an experimental assessment of latent remuneration spread by regions on the basis of ratio of shares of household expenditures on expensive goods and services in separate regions to these expenditures in Russia as a whole.

Data of 1998 household budget surveys with some adjustments was used as a basis for calculations.

The results of calculations showed that sorting out of Russian Federation regions by range more or less coincides with distribution obtained using methods described above. All regions were split into four groups. In the first group, in which most volume of latent remuneration was presented, 17 territories of total 20 coincided i.e. 85%, in the second group - 13 of 20 i.e. 65%, in the third group - 15 of 20 i.e. 75%, in 4 groups - 13 of 15 i.e. 87%.

Prospective directions of measurement of non-registered economy

1. The adoption of system of national accounts to the Russian statistical practice was started in 1991. The work was carried out within the framework of the State program of Russian Federation transition to the system of accounting and statistics used in the international practice and took the period till 2000. At present the Program of development of the system of national accounts in Russia for the period 2000 - 2015 is being worked out. The program is aimed at defining a set of tasks. Performing of these tasks should allow introducing the entire complex of accounts stipulated by the Handbook on the SNA-1993. The similar programs are prepared for sectoral statistics. One of the items in these programs is devoted to the problems and methods of solving them in the field of non-observed economy.

2. From the moment of development of national accounts was launched the terms and concepts based on classifications of operations, assets, balancing items presented by SNA-93 have been started to be used. However lack of many qualifications insufficiently fast adaptation of available qualifications to the international standards does not allow distinguishing even main SNA concepts at present.

With the purposes of establishing the international standard of accounting by sectors of economy Goskomstat of Russia is in process of transition to NACE classification. All-Russian classification of type of economic activities (OKBЭД) is developed on the basis of this classification. The development of OKBЭД should be finished by the Ministry of Economic Development and Trade in current year.

As regards the classification for production in the long term Goskomstat of Russia plans to conduct statistical survey on production of major goods and rendered services on the base of EU Classification of Production by Activity (CPA). In this purpose until 2003 the appropriate national classification will be developed. Inculcation of these two classifications got key importance since they should allow applying in Russian statistical practice the method of data linking with using input tables and commodities and services.

3. At present the operative database is created on the base of database of unified statistical forms П-1, П-2, П-3, П-4. This database includes regionally functioning database by objects and the aggregated indicators database developed for federal level. However taking into account that different units of observation are applied for the above listed statistical forms there is no mechanism for comparison of parameters used in this forms. Solving this problem is one of the most important short-term goals for Goskomstat of Russia. One possible way to solve this is to create register of local units. It would be possible after conduction of structural survey at the enterprises of all sectors of economy (year 2002).

4. Building of “databanks” of parameters that closely connected to shadow processes and building of “databanks” of business surveys results on shadow economy and particularly on involving of enterprises directors to shadow economy, concealment of the information, on prevalence of shadow processes etc. It will allow measuring operations for hidden, informal and non-legal economic activities using various indirect methods regularly.

5. Development of classification of non-registered types of economic activity to fit traditional and modern types. The classification should be applicable both for the system of national accounts and for tax, customs, law enforcements bodies. It should allow providing the coordinated exchange and comparison of the information on non-registered economy received from different authorities. Introduction of this classification will also facilitate the analysis of the most widespread types of shadow economic activity, clarification of the forms of their “building-in” to general economic mechanism. It should give opportunity to make known dependence of this types of non-registered activities on the current economic policy and legislative practice, and also types of shadow activities to be struggled by law-enforcement bodies. Development of the classification is possible only by coordinating efforts of Goskomstat of Russia, Ministry of Taxes and Revenues, Federal Tax Police

Service, Ministry of Internal Affairs and other interested authorities attracting economic scientists and sociologists.

6. Development of satellite accounts first of all for so-called financial intermediary sector, since overwhelming part of shadow operations is carried out in this area. Building of satellite accounts for financial intermediary sector should allow reveal the basic directions in which the shadow operations are carried out, and also to estimate its approximate sizes. It should also help to provide reliable official statistical data of financial intermediary sector.

7. Development of a method of complex use of information from Ministry of Taxes and Revenues' general population and from Tax Police sample populations. Comparison and linking of information from these two populations should provide not only practical sense for revealing and prevention of tax crimes, but also should allow improving accuracy of shadow sector estimations at "building-in" this information to system of regular statistical measurements.

8. Detailed and complex analysis of the statistical data on structure and dynamics of the prices by types and industries, comparison to the data of input-output tables and supply and use of tables. Thus the particular attention should be paid to a difference between the price of purchase and the producer price, that is to consider structure of distribution of the trade extra charge, and also distribution of the value added cost by the third quadrant of input-output tables. Such analysis should contribute to study of shadow distribution and use of material and monetary resources.

9. Comparison and linking of input-output tables data in current and changed prices to industrial and sectoral deflators. It should provide reliability of estimations of commodity and monetary and financial flows as well as in non-registered sector.