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REGIONAL ACCOUNTS IN THE CIS COUNTRIES[1]

Submitted by the CIS Statistical Committee

The meeting is organised jointly with Eurostat and the Organization for Economic
Co-operation and Development

INTRODUCTION

1.   The purpose of this paper is to present an overview of the current practices of the CIS countries in the compilation of regional national accounts and gross regional product (GRP), the use of these data by governments and research institutions and to discuss the conceptual and practical problems encountered by the countries in the process of compiling regional accounts, sources of data and their limitations. The role of the Interstate Statistical Committee of the CIS (CISSTAT) in providing technical assistance to the CIS countries in promoting these statistics is highlighted. Finally, the paper briefly discusses the plans of the CIS countries for future work in this area.

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[1] This paper has been prepared by Y. Ivanov at the invitation of the secretariat.

DEMAND FOR REGIONAL ACCOUNTS IN THE CIS COUNTRIES; USERS OF THESE DATA AND TYPES OF POLICY ISSUES THAT RELY ON THESE STATISTICS

2.   The recent years have witnessed growing demand from governments of the CIS countries (both at the federal and regional level) for regional statistics and, in particular, for regional national accounts. This development is due to governments paying more attention to social and economic development at the regional level. Regional policy has become an integral component of the overall programs of socio-economic development of the countries; it is formulated in the official government documents dealing with development of the regions.

3.   For example, in 2005 the Ministry of Regional Development of Russia released a document entitled "Concept of Strategy of Socio-Economic Development of Regions of the Russian Federation". This document contains an analysis of the problems of socio-economic development in the regions and priorities in the regional policy of the government as well as the mechanisms of their achievement. The data on GRP are used in this document to highlight interregional differences in the level of economic development and the dynamics of these differences over a period of several years.

4.   Currently in Russia, GRP data are used as a starting point for computation of the amount of transfers to the regions eligible for financial assistance from the centre. Specific formula of computation of these transfers is described in the document of the Ministry of Finance of Russia entitled "Methodology of Distribution of Money from the Fund of Financial Assistance to the Subjects of Russian Federation".

5.   The differences in the level of economic development of the regions of Russia and their implications are discussed in the UNDP Human Development Report 2005, which contains among other things estimates of human development index (HDI) for all regions of Russia for 2002.

6.   To respond to this demand from governments, statistical services of the CIS countries include in their programs of work the compilation of regional accounts and, in particular, computation of GRP and related flows. These data are used for analysis of the economic performance of regions and their contributions to the overall economic growth of the country, for an assessment of regional differences in the level of economic development, and in the analysis of the financial relationship between the centre and the regions. These data are also used to assess the amount of financial assistance provided to individual regions. In conjunction with other data, the estimates of GRP are used for an analysis of regional differences in the level of income, employment, poverty and migration. At a broader level, these data (in conjunction with other regional indicators) are used for the formulation of the regional policy and for assessment of its implementation. In all CIS countries, research institutions are also users of GRP data. In some CIS countries, estimates of GRP are used by individual researchers for experimental derivation of regional indexes of human development. In only a few countries are these data demanded by business and other units.

GENERAL OVERVIEW OF PRACTICES OF COMPILATION OF REGIONAL ACCOUNTS IN THE CIS REGION

7.   At present, the compilation of regional accounts is carried out by 9 CIS countries: Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Turkmenistan, Uzbekistan and Ukraine. Armenia and Belarus do not compile such estimates. Armenia does not consider them a priority task (at least up to 2006) because of the relatively small size of the territory of the country and its regions. In Belarus, a possibility of compilation of regional accounts is being discussed; however, no definite decision on this matter has been made yet. Moldova ceased compiling regional accounts after the introduction of new units of territorial division of the country. Their number increased from 12 to 32 and they are considered now to be too small.

8.   The regional accounts are compiled for those regions which represent the highest level in the administrative and territorial hierarchy of the countries, because there they can be used in a meaningful way for management and policy making, and appropriate information is available. The number of such regions varies from 4 regions in Azerbaijan and Tajikistan to 88 in Russia.

9.   Compilation of regional accounts is organised differently in different CIS countries. Thus, in Azerbaijan, Kyrghyzstan, Russia, Uzbekistan and Ukraine, preliminary estimates of GRP and of related flows of regional accounts are produced by regional statistical offices and then finalised in national statistical offices. In other countries (Kazakhstan, Tajikistan and Turkmenistan), the GRP figures are obtained by national statistical offices.

10.   The following accounts and indicators are compiled at the regional level:
●   production accounts by industry at current prices;
●   value added by industry at current and constant prices;
●   GRP at current and constant prices and volume indices of GRP;
●   generation of income accounts by industry;
●   selected indicators of the use of income accounts.

11.   The CIS countries started compilation of regional accounts at various periods and at present they are at different stages of this work:
●   all countries produce estimates of GRP at current prices;
●   Russia, Tajikistan, Uzbekistan and Ukraine produce estimates of GDP in constant prices;
●   all countries compile regional production accounts by industry;
●   only Russia compiles regional generation of income accounts by industry;
●   Georgia, Kyrghyzstan, Russia and Ukraine compile selected components of final use of GRP;
●   most of the countries carry out GRP estimates only annually;
●   quarterly estimates of GRP are produced only by Tajikistan and Uzbekistan.

12.   Estimates of GRP carried out by the CIS countries are based on the concepts of the SNA 1993 and the ESA 1995, so in this respect they are comparable both between each other and in a broader international context. The CIS countries used recommendations on the compilation of regional accounts developed by the CIS Statistical Committee and based on the international

standards.[2] Some CIS countries were assisted in this work by experts from statistical agencies of other countries on a bilateral basis. For example, Moldova received technical assistance from Sweden, Ukraine from Germany, and Kyrghyzstan from Russia.

13.   The methodological principles of computation of GRP and related flows are similar to those used to compile GDP figures at the national level. They refer to:
- definition of production boundaries and in particular, to inclusion of underground and informal activities. However, illegal goods and services are not included (both in national and regional accounts);
- the scope and content of the GRP components by final use and by types of income, e.g. regional gross fixed capital formation is defined to include purchases of software and databases, originals of artistic and literary works and cost of mineral exploration;
- major classifications of GRP and its components, e.g. classifications of kinds of activities by industries, classifications of products, incomes, taxes and subsidies, assets, etc.;
- methods of valuation of GRP in constant prices, e.g. using the same types of price indices or volume indices for deflating or extrapolating the relevant components of GRP and GDP.

14.   In some cases there are deviations in methods of computing GRP from the general principles of computing GDP due to informational and organizational problems. Holding gains and losses are not accounted at the regional level because these estimates are considered too complicated for regional statistical offices, which usually have limited labour and other resources. As a result, in some countries (for example, in Russia), holding gains and losses are not removed from GRP and its relevant components and represent a part of the discrepancy between GDP and the sum of GRP. In other countries, which ensure the reconciliation of GDP and GRP (for example, in Ukraine), holding gains and losses, computed at the national level, are allocated to regions by the central statistical office.

15.   GRP in constant prices is valued only by the production side on the basis of single deflation approach. Deflation or extrapolation are used to estimate value added by industry depending on the reliability of available information. The latter comprises:
- volume indices by main branches of industrial activity;
- price indices on industrial goods and services provided to agricultural enterprises;
- volume indices of contractor' work in construction;
- indices of cargo and passenger turnover by type of transport;
- volume indices of retail and wholesale trade turnover;
- volume indices of communication services;
- quantity and price indices for various communal services;
- volume indices for personal services;
- consumer price indices for market services of health care, education, culture;
- indices of number of employees for non-market services.

Output of agricultural goods in constant prices is computed with the help of the direct valuation

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[2] General principles of computation of gross regional product, Interstate Statistical Committee of the CIS, Moscow, 2001. Proposals for improving the methodology of computation of gross regional product, Interstate Statistical Committee of the CIS, Moscow, 2005.

method. For this purpose, average producer prices by main agricultural goods and by type of producing units are used.

16.   Underground and informal activities are accounted both at the national and regional levels using the same methodology and sources of information. These estimates are carried out by regional statistical offices in the course of computing output and value added by industries. Central statistical offices ensure their reconciliation with the national data and after adjustments (when needed), the results are included into compilation of production accounts for regions.

17.   The CIS countries employ different methods of compilation of regional accounts:
- Azerbaijan and Turkmenistan use the "bottom-up" method;
- Georgia, Kazakhstan and Kyrghyzstan use the "top-down" method;
- Russia, Tajikistan, Uzbekistan and Ukraine use mixed methods.

Production activities of multiregional entities are usually regionalized with the help of the following approaches: i) separate establishments (local kind-of-activity units) are identified and allocated to the region where they are situated; ii) the whole entity is allocated to the region where the head establishment is situated; iii) data on production activities of all units included into an industry at the national level are allocated to regions with the help of the "top-down" method using some distribution keys.

18.   The CIS countries implement all these approaches with some peculiarities in individual countries. For non-financial corporations, most of them use the first and the third approaches; for financial corporations – the third and the second approaches; and for general government and NPISH – the third and the first approaches.

19.   The table in the annex to this paper contains a summary of the practices of the CIS countries in the compilation of regional accounts.

OVERVIEW OF THE MAJOR CONCEPTUAL AND PRACTICAL PROBLEMS

20.   As mentioned above, concepts, approaches and procedures used for compilation of regional accounts and computation of GRP are generally similar to those used for the national accounts. However, there are a number of reasons which make it difficult to implement some of these concepts, approaches and procedures at the regional level. As a result, when compiling regional accounts, the CIS countries have to adjust methods used for compilation of national accounts to take into account the available information.

21.   It refers, for example, to the concept of regional residency which is in general consistent with the international definition of this category used in compilation of balance of payments and national accounts. However, the implementation of this concept in the practice of regional accounts requires a solution to some of the practical problems associated with the lack of appropriate information. Implementation of this concept in production accounts and generation of income accounts is relatively easy to achieve because the information on activities of enterprises located at the territory of the region is normally available. Some efforts may be needed to obtain data on activities of: (i) subdivisions of the multiregional enterprises, (ii) of the units which are affiliated to foreign units located abroad, (iii) on activities of unincorporated enterprises owned by households whic h live in other regions, and (iv) on activities of the

government bodies located at the territory of the given region but controlled and financed by the central government. It follows from the above that, at present, computation of GRP by production and income methods is the most appropriate practice for the CIS countries.

22.   Implementation of the concept of residency in distribution of income accounts (other than generation of income account) and use of income accounts is more difficult to achieve in practice because the data on income received in the given region by households which normally live in other regions or even countries are not immediately available. The data on income of residents of the given region receivable in other regions are not available in the CIS countries either.

23.   The implementation of this concept in use of income accounts and goods and services accounts requires information on purchases of goods and services by households which normally live in other regions and on purchases of goods and services by resident households in other regions. Data on other interregional flows of goods and services are also needed. Such data do not exist in the CIS countries.

24.   This implies that currently, and in the foreseeable future, computation of GRP by expenditure approach is not feasible and is not envisaged in the CIS countries. For this reason, only components of final expenditures by regions are compiled in selected CIS countries. These estimates include final consumption expenditure of households at the territory of the region (that is both by residents and non-residents), final consumption expenditure of the general government and NPISH, gross fixed capital formation.

25.   GRP is identical to GDP in its economic sense and in theory the sum of GRP of all regions (including the extra-regional territories) should be practically equal to GDP (leaving aside activities in extra-territorial enclaves). However, only Georgia, Kyrghyzstan and Ukraine (the latter commencing from 2000) achieve entire reconciliation between GDP and the sum of GRP. Other countries show explicitly the discrepancy that contains, as a rule, value added of external trade, of the central government units rendering collective services, FISIM, taxes on exports and imports. In addition, some countries do not allocate to regions value added of railway transport and NPISH (Kazakhstan and Tajikistan), or of insurance (Kazakhstan, Tajikistan and Uzbekistan). Kazakhstan also does not allocate to regions value added of motor transport and of the whole general government sector.

26.   The problems with reconciliation of regional and national accounts and aggregates are of two types are that they refer to conceptual issues and to problems due to the lack of adequate information. These problems are discussed below.

27.   *Regionalization of central government* is one of the issues that seems to need further clarification. The central government units may function in various regions but they are controlled and financed directly by the central government bodies. Hence, they often do not submit reports on their activities to local authorities. They provide mostly collective services for the country as a whole (for example, military units or public research centres). Some of them provide individual services used by both residents and non-residents of regions (for example, educational institutions, medical and rest centres supervised by the central government bodies).

28.   CIS countries use different approaches to regionalize central government bodies:
● Russia, Turkmenistan and Ukraine allocate them to the regions where they function;
● Azerbaijan allocates them to the region where the supervising government body is located;
● Georgia, Kyrghyzstan, Tajikistan and Uzbekistan[3] distribute the total national data among all regions of the country.

29.   The CIS Statistical Committee considers the first approach as preferable. This approach is recommended in the methodological documents prepared by the CISSTAT on this topic for the CIS countries. In this context, CISSTAT relies on the general concepts of regionalization of national accounts contained in the ESA 1995 and other related documents of Eurostat. However, it would seem to be useful to clarify this issue in the future.

30.   *Lack of information on activities of multiregional units at the regional level* refers mostly to corporations engaged in transportation (railway transport), external trade as well as to NPISH. The CIS countries deal with this problem in different ways. Georgia, Kyrghyzstan and Ukraine allocate the data existing only at the national level to regions with the help of the "top-down" approach (using some distributive keys such as a number of employees). Other countries use mixed methods or do not allocate these data to regions, so they remain a part of the discrepancy.

31.   CISSTAT recommends the use of the "top-down" approach separately with respect to labour and capital components of value added (compensation of employees and operating surplus). Compensation of employees should be allocated to regions where it is paid out (proportionally to corresponding wages or number of employees). Appropriate distributive keys should also be applied to operating surplus. For example, receipts from cargo and passenger transportation can be used to allocate the operating surplus of railway transport.

32.   *Methods of computation of output and its disposition to selected activities* refers, in particular, to output of FISIM and insurance. The CIS countries deal with this problem using approaches which are similar to those mentioned in the previous para. 31:
● Georgia and Kyrghyzstan allocate the above output to regions in proportion to the number of employees engaged in these activities;
● Kazakhstan, Moldova, Russia, Tajikistan, Turkmenistan and Uzbekistan do not allocate FISIM (some of them do not allocate insurance either) to regions. In this case, value added of FISIM and insurance remains a part of the discrepancy between GDP and GRP;
● in Ukraine the central statistical office carries out the direct estimates of FISIM and insurance services for regions using the same sources and methods as for the national level.

33.   Taking into account the difficulties that most countries encounter in computing output and value added of the above kinds of activities by regions, CISSTAT recommends allocating FISIM to regions proportionally to the sum of value added of all industries. With respect to insurance, it is recommended to distribute its value added by labour and capital components with the help of the "top-down" approach (see para.31). Insurance premiums can be used in this case as distributive keys for operating surplus.

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[3] Only individual services in Tajikistan and Uzbekistan.

34.   *Accounting of selected transactions only at the national level* refers, in particular, to taxes and subsidies on imports and exports. Most of the countries do not allocate them to regions because of the absence of adequate direct data or indicators that can be used as distributive keys.

35.   *The treatment of activities at the extra-regional territory.* Only Moldova showed activity at the extra-regional territory (namely, the activity of diplomatic missions abroad) separately in their regional accounts. Azerbaijan and Kyrghyzstan allocate the activity of extra-regional units to the region where the controlling unit is located (for example, the Ministry of Foreign Affairs for diplomatic institutions, head office of corporations engaged in extracting mineral resources). Most of the CIS countries do not identify the economic units engaged in activities at the extra-regional territories (such as embassies, consulates, military bases, establishments of corporations engaged in mining and fishing, etc.) and do not estimate separately the activities of these units. However, this means that, implicitly, these activities are accounted together with the activities of the controlling unit.

36.   In the documents on this topic, prepared by CISSTAT, it is recommended to record transactions of the extra-territorial units separately as transactions of a notional region.

OVERVIEW OF THE EXISTING SOURCES OF DATA

37.   The sources of information used for estimates of GRP by the CIS countries are as follows:
- business registers;
- reports of enterprises on output, sales and cost of production;
- special sample surveys and special regional reports;
- employment statistics and surveys;
- household budget surveys;
- reports on execution of the regional and local budgets and extra-budgetary funds;
- banking statistics;
- data of tax authorities;
- reports of NPIs.

38.   Business registers of all CIS countries contain information on the location of enterprises. In most of the countries, they also contain information on the location of their establishments (local units) that is used for identifying the resident units for regions. Special statistical reports on main indicators of activities of enterprises by regions are developed on the basis of this information. Statistical data on number of employees and output, coming from business registers, represent distributive key for allocating data of multiregional units to corresponding regions.

39.   The information collected by the CIS countries from the above sources for compilation of regional accounts is not entirely adequate for this purpose. It has the same shortcomings as the information collected for the national accounts and needs the same adjustments. Thus, it needs to account for non-observed economy, to shift to recording transactions on accrual basis, to exclude holding gains, etc. Some adjustments are needed in respect of information on income and expenditure of local government bodies in order to make this information consistent with the requirements of national accounts.

40.   In this respect, it is worth noting that information on the execution of the state budget prepared by the Ministry of Finance of the Russian Federation is not fully harmonised with the national accounts. It refers to the scope of the general government sector, definition and classifications of some transactions, using cash rather than accrual basis and so forth. Similar limitations are characteristic for reports on activities of the local government bodies. Another limitation of this information on incomes and expenditures of the government bodies is that it does not include transactions in kind and is limited to transactions in money form.

41.   Some countries do not have price indices of sufficient quality for selected kinds of economic activities which are needed for estimating GRP and its components in constant prices and computation of volume indices of GRP. This refers in particular to price indices needed for deflation of intermediate consumption.

42.   Most of the countries do not collect quarterly data from selected categories of enterprises, such as small enterprises, joint ventures, etc. In such cases the corresponding adjustments are usually introduced in the estimates at the national level. The lack of these data on regional level can further affect the estimates.

43.   The recommendations of CISSTAT to the CIS countries with respect to sources of information are to obtain information which would allow the usage, whenever possible, of the "bottom-up" method, or at least its modified form. This refers in particular to information on activities of multiregional corporations.

44.   The information collected from multiregional corporations should permit a breakdown of data on output and production cost of an enterprise by establishments (local kind-of-activity units). If this breakdown is not possible to achieve, then it is recommended to collect other data such as wages, number of employees, fixed assets, etc., and to use them as distribution keys for allocating the data to regions.

45.   In some cases it is difficult to collect information at establishment level. It refers usually to such industries as construction, railway and air transport. In order to regionalize these activities, it is recommended to use the "top-down" method, according to which the national aggregates for an industry are allocated to regions with the help of some distributive keys applied separately to components of value added. In order to have appropriate distributive keys, it is necessary to collect regional information on such indicators as wages, number of employed, fixed assets, etc. For financial corporations, it would be useful to collect information on loans provided by banks and deposits, on insurance premiums, and contributions to private pension funds by regions where these corporations and their establishments are located.

PLANS FOR FUTURE WORK

46.   Further development of regional accounts is one of the priorities in the work on national accounts in most of the CIS countries. Broadly speaking, it is intended to expand the scope of regional accounts, to improve accuracy of the estimates of the major aggregates in an attempt to achieve a better consistence between the GRP and GDP and to raise the analytical usefulness of the data by using international classifications. Since there are some differences between the CIS countries in the degree of development of regional accounts, there are some differences in respect

of specific plans for immediate future. Nevertheless they can be summarized as follows:

- improvement of the data sources for estimates of GRP and related flows. Special sample surveys and introduction of new forms of statistical reports are planned for this purpose;
- introduction of new industrial classifications based on international standards (Russia);
- improvement of price indices to be used as deflators for the GRP components;
- introduction of GRP estimates at constant prices and volume indices of GRP (in countries where these estimates have not been made yet);
- introduction of compilation of generation of income accounts by industries (in countries where this account has not been compiled yet) ;
- introduction of computation of selected components of final use of GRP (in countries where these estimates have not been made);
- organization of semi-annual estimates (Ukraine);
- organization of preliminary estimates in compilation of regional accounts at the regional level (Turkmenistan).

47.   CISSTAT intends to continue providing technical assistance to CIS countries in this area by revising the recommendations on this topic, by monitoring activities in the countries and studying international experience, and by discussing this topic at the expert meeting of CIS countries on national accounts which are periodically convened. CISSTAT is interested in international cooperation in this field. In this context, it is worth noting that this topic was suggested by CISSTAT to Eurostat among other possible areas of cooperation between the two organizations. Organization of an international seminar for the experts from CIS countries is also envisaged in this context.

Annex (English and Russian only) - Summary of the practices of the CIS countries in compilation of regional accounts as of the end of 2005

	Azerbaijan	Georgia	Kazakhstan	Kyrgyzstan	Moldova	Russia	Tajikistan	Turkmenistan	Uzbekistan	Ukraine
1. Years for which the regional accounts have been compiled	2000-2004	1998-2004	1990-2004	1995-2003	2000-2001	1994-2003	2001-2004	1998-2001	1993-2004	1996-2002
2. Periodicity of computation of GRP:										
- annual	+	+	+	+	+	+	+	+	+	+
- quarterly							+		+	
3. Prices in which GRP is valued:										
- current prices	+	+	+	+	+	+	+	+	+	+
- constant prices						+	+		+	+
4. Methods of computation of GRP:										
- production method (as sum of value added)	+	+	+	+	+	+	+	+	+	+
- distributive method (as sum of incomes)						+				
- estimates of selected components of final use:		+		+		+				+
- household final consumption expenditure		+		+		+				+
- actual household final consumption						+				
- general government final consumption expenditure				+						+
- individual consumption of general government										
- NPISH final consumption expenditure				+						+
- gross fixed capital formation				+		+				
- exports and imports of goods and services				+						
6. Adjustment of GRP for accounting non-observed production	+	+	+	+	+	+	+	+	+	+
7. Reconciliation of GRP and GDP:										
- sum of GRP is not equal to GDP, discrepancy exists	+		+		+	+	+	+	+	+ up to 1999
- sum of GRP is equal to GDP, all components of GDP are allocated to regions		+		+						+ begin. 2000
8. Discrepancy between sum of GRP and GDP contains:										
- railway transport			+				+			
- motor transport			+							
- external trade							+	+		
- FISIM			+		+	+	+	+	+	
- insurance			+				+		+	
- individual services of general government			+							
- collective services			+		+		+		+	
- NPISH			+				+			
- taxes on products (other than taxes on imports and exports)			+					+		
- taxes on imports and exports			+		+	+			+	
- subsidies on products			+					+	+	
9. Identification of extra-regional territory in the context of compilation of GRP:										
- yes					+					
- no	+	+	+	+		+	+	+	+	+
10. Organisation of estimates of GRP:										
- production of estimates is carried out initially by regional statistical offices	+		+			+			+	+
- estimates are carried out only by the central national statistical organization		+	+		+		+	+		
11. Approaches used for computation of GRP:										
- "bottom-up"	+				+		+	+	+	
- "top-down"		+	+	+	+		+			
- mixed						+	+	+	+	+

Note: Armenia and Belarus do not carry out estimates of GRP, Moldova ceased them after 2003 due to introducing new territorial units. Azerbaijan carries out estimates of GRP for few selected regions.