

**Distr.
GENERAL**

**CES/AC.68/2002/6
16 April 2002**

ENGLISH ONLY

**STATISTICAL COMMISSION and
ECONOMIC COMMISSION FOR EUROPE**

**ORGANISATION FOR ECONOMIC
CO-OPERATION AND
DEVELOPMENT (OECD)**

**CONFERENCE OF EUROPEAN
EUROPEAN STATISTICIANS**

**COMMISSION OF THE
COMMUNITIES (EUROSTAT)**

**Joint ECE/Eurostat/OECD
Meeting on National Accounts**
(Geneva, 24-26 April 2002)

THE PRACTICE OF USING THE UKRAINIAN NATIONAL ACCOUNTS

Invited paper submitted by State Statistics Committee of Ukraine*

Summary

The issues of using the national accounts indicators with reference to the needs of domestic users, as well as the problems arising when working with international organizations are considered. The practice of using the national accounts takes into consideration, first of all, the status of the Ukrainian national accounts, as well as their methodological features in comparison with SNA-93, as well as the directions of further improvement and development.

* Prepared by Mr. Viktor Holovko, State Statistics Committee of Ukraine.

I. Usage of National Accounting and Policy Making

1. Development of market relations in Ukraine resulted in necessity of drawing up and using essentially new information in the field of macroeconomic statistics. It caused introduction of international standards in this statistics domain, the basic thereof being the system of national accounts. Introduction of national accounts in Ukraine commenced nearly ten years ago. It is necessary to mark that during a certain period parallel development of the national accounts and the balance of material product was ensured. The whole system of administration and of economic and political decision making, as well as the stereotype of users was built upon the national economy balance concept. And it was, to some degree, a certain obstacle to introduction of SNA in Ukraine.

2. Methodological framework for the Ukrainian system of national accounts (USNA) is the SNA-93 international standard. This international standard is introduced in Ukraine with allowance for the special features of legislative and normative basis, as well as the existing data sources. Now USNA represents a system, which includes annual and short-term calculations, and drawing up of Input-Output tables and regional gross value added calculations. The practice of using the national accounts is studied further against the background of assessing the state-of-the-art Ukrainian national accounting.

Annual USNA Calculations

3. Annual SNA calculations consist of two stages: the first includes preliminary GDP estimation, the second – final calculations, which along with the GDP estimates include calculations for institutional sectors and the rest-of-the-world accounts (see Appendix 1).

4. The final annual USNA calculations are made for five institutional sectors. For domestic economy they cover the accounts of goods and services, production, distribution and use of income. They include capital account out of accumulation accounts. The number of indicators (output, intermediate consumption, remuneration etc.) is calculated for 25 branches of the economy. The interactions with other countries are reflected by the rest-of-the-world accounts, which include the external goods and services account, the external account of primary income and current transfers, the external accumulation accounts, in particular, capital account.

5. Development and methodology of drawing up sector accounts is being permanently improved. It is connected to incorporation of international standards with regard to other information systems, integrated with the national accounts. The Ministry of Finance and the National Bank are primarily in charge of their development. Transformation of primary accounting, on the one hand, converges it to the international standards, which allowed better reflection of developments in market relations, and, on the other, requires constant modification and improvement of national accounts calculations. This process began with modernization of primary accounting (bookkeeping) in the sector of financial corporations, causing modification of methodology of output calculation for the National Bank. Now, in Ukraine are introduced new accounting standards for the sectors of non-financial corporations (it is necessary to note that the share of this sector in economy makes up 70% of the total

volume of production). Primary accounting in this sector of economy is changed, entailing a modification of statistical recording in structural statistics, and in the system of calculations of output and intermediate consumption. Recently, the Ministry of Finance commenced the work on improvement of income and expenditure budget items. This work is carried out by the Ministry of Finance together with the State Statistical Committee (SSC), the budget structure approaching ever closer COFOG.

6. Input-output tables at purchaser prices and at basic prices with selection of 38 economic activities are developed annually. They enable checking coherence of statistical data on the flows of goods and services received from different sources. The structure of these tables also allows to deflate intermediate consumption. The input-output tables are used, mainly, for constructing long-term economic forecasts. Though recently increasing interest of politicians is paid to the matrices of margins, taxes and imports.

7. Since 1996, the SSC makes annual regional calculations of gross value added (for 27 regions of Ukraine) at current and comparable prices broken down by industries. Regional accounts are widely used both at central level and by local authorities. With the help of regional value added complex analysis of regional economic development is made, its role in the national economy determined, and the structure of production of each region studied.

8. Taking into account the dynamics of economic development, preliminary annual estimates are of special interest for users, though they are compiled on the basis of preliminary annual information and estimates. This is explained by the fact that the performance of the country is evaluated on the basis of these estimates, and the Government makes a report before the Supreme Council. Relevant preliminary data are used when drawing up the budget and forecasting estimates of economic development and, in the final end, the annual program of country's socio-economic development..

9. These preliminary computations consist of the GDP estimate by the production method, by categories of incomes and final use. Traditionally, preliminary estimates of the volume of production is the most demanded by the government. This is explained by the fact that the production method enables to evaluate economic development as a whole and, in particular, the structure of production. But recently, when can be observed a stable tendency of production growth in main industries, GDP income structure is of increasing interest for the government. It is connected, firstly, to monitoring of tax load on various sectors of economy, and secondly, to the institutional redistribution of remuneration and mixed income.

Short-term USNA Calculations. Short-term Ukrainian national accounts include quarterly and monthly calculations of gross domestic product.

10. Quarterly USNA accounts comprise GDP calculations, which introduction began with the traditional production method. Further development of quarterly accounts consists in development of methodology and introduction of quarterly GDP calculations by final use. The problem of initial quarterly calculations was that they were made on cumulative basis (for example, first quarter, half-year nine months) and were compared to the respective period of previous year. These calculations were connected to the system of collection of primary

statistical information with progressive total, and influenced data quality, while all errors and biases fell on the fourth quarter. These calculations did not allow to compare quarters within the year and to make adjustments for the seasonal factors.

11. The switch to the discrete basis of calculations since 1998 was the next stage of development of quarterly accounts. The SSC carried out retrospective estimates by “pure quarters” for the previous years. And now in Ukraine independent estimates of GDP production and use are made, being fully coordinated at current prices. In view of the needs of internal consumers, GDP by income categories is estimated as well, where the gross operating surplus and mixed income are the balancing items.

12. The development of quarterly calculations has, firstly, enabled to give new information to domestic users of data that has prominently affected the increase of their interest in quarterly estimates, and, secondly, it has provided possibility to complete international questionnaires on quarterly accounts.

13. On the part of main users – the government and other ministries and agencies (mainly institutions engaged in forecasts: the Ministry of Economy, the National Bank, the Ministry of Finance, etc.) – the first quarterly estimates are in greatest demand. Recently two tendencies were detected: firstly, the circle of users of quarterly estimates is expanding, and, secondly, the interest in the adjusted quarterly data is increasing. In our opinion, it is connected, first of all, to the considerable work of the SSC on explaining the policies and methods of quarterly estimates and their interpretation and use for estimating economic trends.

14. Monthly GDP estimates are a specific feature of the USNA and are used for current monitoring of economic situation in the country. They are made with many assumptions, conditionalities and expert estimates, connected to the timing of their submission (see Appendix 1). The method of extrapolation of indicators of each activity is applied to calculate GDP at comparable prices of the respective period of previous year. The basis for the calculations are the provisional data for the previous year at current prices, calculated by production method (i.e. output, intermediate consumption, gross value added, taxes on products) distributed by quarters, and then by months. The methodology is shown in Appendix 2.

15. In spite of the fact that monthly GDP estimates are connected to certain assumptions and the SSC experts are permanently carrying out explanatory work concerning the level of reliability and quality of monthly estimates, now, they enjoy the greatest demand among the users of macroeconomic information. In particular, in the legislative and executive government bodies. In our view, it is connected both to economic and to political situation in the country. The data on monthly GDP estimates are disseminated among a wide range of users as promptly as possible in the form of “express information”, and changes in real GDP are published in mass-media.

II. Policy, Legislative Basis and the USNA

16. According to the Law of Ukraine “On the State Statistics”, where the rights and functions of statistics bodies with regard to drawing up and disseminating information are determined, particularly on national accounts, the SSC is the single official developer of SNA data. Though it is necessary to mark, that some centers and scientific organizations make the alternate GDP estimates, based, principally, on the SSC data (i.e. there are discussions on methodological issues of assessing individual USNA items).

17. During compilation of national accounts, access to the information is provided only for the SSC employees, directly engaged in the production. After completion of calculations, preliminary information on the GDP volumes and its components, in the form of press releases, is forwarded simultaneously to the government and the mass media.

18. Recently the main recipients have expressed desire to shorten deadlines for preliminary and final estimates of annual data, as well as for quarterly GDP calculations. As a consequence, in 2001, the Cabinet of Ministers of Ukraine has approved a rule, implying reduction of time frame for annual national accounts calculations. So, for annual accounts, preliminary GDP estimate is published already in February of the year following the reference one. Therefore, taking into account the pressing deadlines of development of national accounts indicators, there is a problem of trade-off between meeting deadlines and the quality of national accounts – and taking into account the revisions and adjustments – of increasing the degree of confidence in the USNA data.

19. Taking into consideration the situation, and also in view that preliminary annual GDP estimation is made on the basis of operative data, ratios and adjustments, the SSC is now working on introduction of third intermediate estimation. This estimate will be made, first of all, on the basis of quarterly data, as by that time there will be information for the fourth quarter (traditionally, information for the fourth quarter is provided together with the annual data), and secondly, on the basis of additional annual information from enterprises, institutions, balance of payments and some other sources.

20. Considering the needs, both of politicians and deadlines for submission of quarterly data according to the Special Data Dissemination Standard (SDDS) of the International Monetary Fund and the European Union requirements, the SSC will be reducing the deadlines of quarterly calculations. In this connection, the SSC works on engaging of alternate data sources. One of these sources is the data of business tendency surveys, which can be used for prompt provision of quarterly GDP indicators (see Appendix 3).

V. Challenging Issues in the USNA

21. Recently, the users’ interest in comparing the Ukrainian national accounts indicators with the ones of other countries has considerably increased. Such comparability to the data of other countries is a problem for both quarterly and annual figures. It is connected, first of all, to the usage of different classifications, entailing invariable difficulties when matching the Ukrainian indicators with other countries, and when completing international questionnaires.

22. In 2001, the SSC has made a very important step forward in this direction. All annual and quarterly GDP estimates are calculated according to the classification of economic activities, harmonized with ISIC. In view thereof there is a number of problems, the main one being comparability of national accounts data, their presentation as time series. It calls to make retrospective calculations, entailing some more adjustments for the previous periods.

23. A methodological feature of the USNA is the application of one of the main SNA-93 principles – the principle of accrual accounting of the transactions. In Ukraine, there are considerable – from the point of view of the elements of distribution system – arrears with regard to wages and salaries and tax installments. Therefore observance of accrual approach results in discordance with the actual financial results of activities of institutional sectors of economy and indicators of net lending or borrowing in the capital account. These circumstances require corresponding clarifications on the part of USNA data developers.

24. Another methodological problem of USNA is reflection of price and volume indicators. Solution of this task depends on improvements in methodology of existing price indices, development of methodology and the calculation of new price and volume indices, as well as calculations at prices of a certain base period (it was impossible to make such calculations earlier because of a number of objective reasons, e.g. high inflation, with the monetary reform, etc.)

25. A number of problems arise for domestic users of information in view of binding of GDP and availability of statistical discrepancy in the formats of quarterly calculations. The availability of statistical discrepancy shows weak places in USNA calculations and undermines consumers' confidence in data quality.

V. Interaction with the USNA Data Users

26. As noted above, the SNA is a rather new sector of statistics in Ukraine and various user categories, essentially, government bodies experience problems with usage of USNA indicators. There are also certain problems in coordination of work on improvement of legislative and information basis, used for drawing up of national accounts. With the purpose of solving these problems in 2001, an interdepartmental workgroup was created. Its primary task is safeguarding of openness and transparency of USNA compilation, and safeguarding coordination of improvement of compiling national accounts aggregates with regard to reforming other information systems.

27. A major component of the dialogue of USNA developers with various user categories is an ever growing need of the latter in provision of relevant metadata along with the applied USNA indicators. This provision is provided for in SDDS and is a requirement of Eurostat regarding user interactions.

28. The SSC actively participates also in the discussion of forecasting indicators – prepared by the Ministry of Economy and the Ministry of Finance, as well as by the National Bank of Ukraine – the majority of which are based on the USNA data. It promotes better mutual understanding and improvement of quality of forecasts.

29. Taking into account all the above-stated, the SSC is now working upon creation of the Concept and of the Program of USNA Development for the upcoming years. The indicated documents will contain directions of further improvement and development, the role of other ministries and departments in providing information basis for the USNA and usage of the received results being legislatively established.

V. Priority Directions of USNA Improvements

30. The directions of improvement and further introduction of SNA-93 concepts are determined with allowance for economic peculiarities of development of Ukraine, and the needs of the government. Alongside with the problems and tasks already mentioned in the report it is necessary to deliberate on some others. So, one of the priority tasks today is the reflection of financial flows in the USNA. This information will promote better reliability of national accounts and will provide users with necessary information on financial status of institutional sector of economy and the country as a whole.

31. The next focus is on the introduction of social accounting matrices that will promote more detailed analysis of socio-economic processes, of the role of certain factors in development of economy and its influence on population's standard of living and on environment. The usage of social accounting matrices will also enable to determine dependencies between the structural characteristics of economy and distribution of incomes and expenditures by groups of households.

Appendix 1**Schedule of Data Development for SNA and GDP Estimates in Ukraine**

Type of development	Development schedule	Basic information, used for calculations
The system of national accounts (annual)	December of the year after the reference year	Annual accounts of the enterprises, input-output table, report on budget performance, balance of payments
Annual GDP estimate		
The first estimate (preliminary)	February of the year after the reference year	Preliminary information
The second estimate (final)	December of the year after the reference year	Annual accounts of enterprises, input-output table, report on budget performance, balance of payments, other extra information
Regional calculations of gross value added	April of the second year after the reference year	Annual accounts of enterprises, report on performance of local budgets, other extra information
Short-term GDP estimates		
The first estimate (monthly)	15 days after the reference period	Preliminary information
The second estimate (preliminary quarterly)	90 days after the reference quarter	Data of quarterly reports of enterprises, report on budget performance, balance of payments
The third estimate (adjusted quarterly)	March of the year after the reference year	Results of preliminary GDP calculations for the year
The fourth estimate (final quarterly)	April of the second year after the reference year	Results of final GDP calculations for the year

Appendix 2

Algorithm of Monthly Estimates of GDP in Ukraine

1. The method of extrapolation of indicators by each activity is applied to calculate the monthly real GDP change.
2. The basis for calculation is the provisional data, redistributed by months for the previous year at current prices, developed by production method.
3. The output of some industries is distributed proceeding from the share of monthly data of their main indicators in the annual volumes. For example, for industry it is the production of commodities, for construction – the volume of construction works, for transport – the freight- and passenger turnover, for trade – the volume of trade turnover, for other industries (activities) – monthly data on the payroll on budget expenditures. To calculate intermediate consumption the share in output relevant to each specific quarter in a certain industry (activity) are used which are applied then to the appropriate months of the quarter. Gross value added is defined as the difference between the adjusted output and intermediate consumption. The annual total of taxes and subsidies on products is distributed according to the monthly data of entire budget on each kind of tax. To breakdown the financial intermediation services indirectly measured there are monthly data of the National Bank on the interest received and paid.
4. After distributing the indicators of output, intermediate consumption, gross value added, net taxes on products for the previous year by months at current prices we have a basis for monthly real GDP calculations.
5. To extrapolate the output of goods and services, the growth (decline) rates of the volume of each industry, such as industry commodity output, construction works, trade turnover, freight- and passenger turnover, as well as the data of labor departments on the number of employees and worked time are used.
6. Intermediate consumption at comparable prices is defined proceeding from the share of intermediate consumption in the output at comparable prices, which is in turn determined with allowance for dynamics of growth or decline during the previous quarter and has in most cases a nature of expert estimate.

7. For revaluation of net taxes on products the production index for all industries is used, which is a simplified revaluation method in comparison with the annual one, where the taxes on each kind are distributed by industries and are revalued according to appropriate indices.

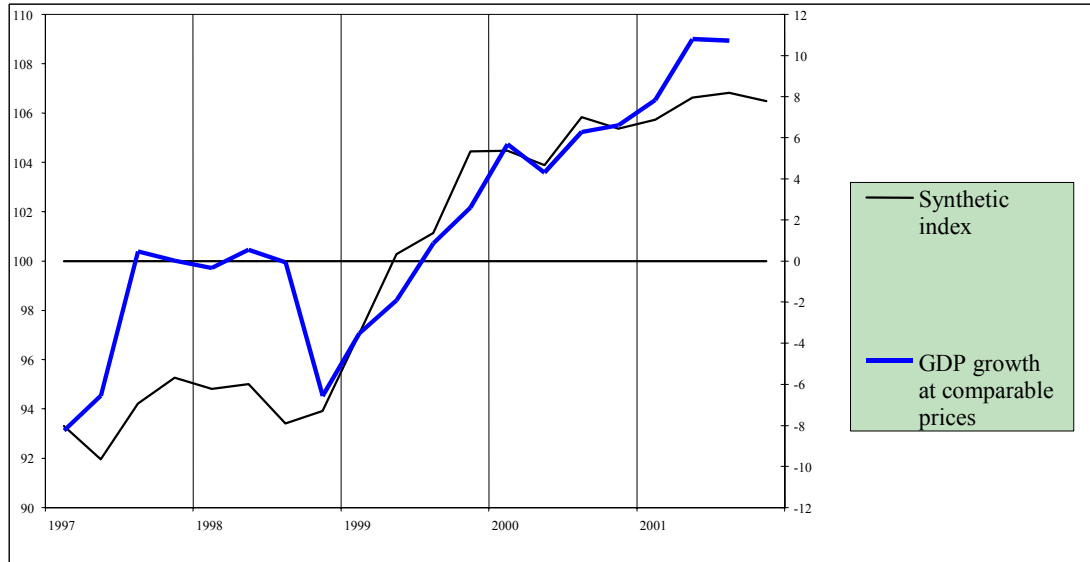
8. Nominal GDP in the current month is calculated through GDP at comparable prices of the previous period, using the aggregate index, consisting of consumer prices and producer prices.

Appendix 3

Use of Business tendency survey for Quarterly (Forecasting) GDP Estimates

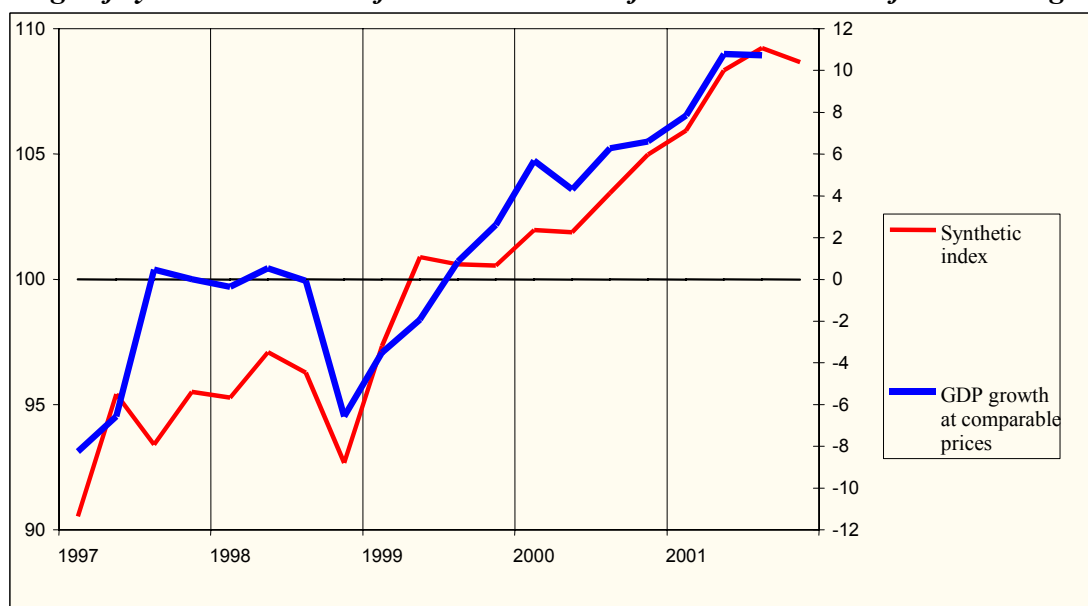
1. Recently statistical services of many countries have conducted a number of researches, the task being to derive short-term forecasts of macro indicators with the use of information of business tendency surveys. We shall consider beneath some approaches, being developed at the SSC.
2. One of the effective techniques to use data of business activity surveys with the purpose of constructing forecasts (under conditions of stable economy) is inclusion of the surveyed variables into the econometric model. The advantage of such models based on business tendency survey information is that the factor model includes the assessment of enterprises about the changes in economic cycle in the short run.
3. The SSC has developed a technique, which with the use of adaptive macroeconomic models, allow to solve several tasks. One of them is forecasting the estimates of business tendency survey respondents (i.e. experts), and the inclusion of two data types (quantitative – statistical and qualitative – from surveys) into the model for deriving estimates of tendencies of GDP change for a short period of time (1 – 2 quarters).
4. Another approach is the usage of combined (aggregated) indicators constructed on the basis of information from business tendency surveys, to simulate the changes in the tendencies of development of macro indicators. Since 2001, relevant research activities are conducted under the auspices of the SSC and the synthetic indicators for individual sectors of economy are calculated with the purpose of forecasting short-term tendencies of changes in the output volumes of these sectors and in GDP. The charts beneath show a sample dynamics of the relevant indicators for two branches: industry and construction.

Usage of synthetic indicator for industry to forecast the ratios of GDP change



5. As can be seen from the graphs, the synthetic index for industry reflects the GDP growth rates precisely enough during the whole period. At early stages of the survey, a greater discrepancy of the synthetic index and GDP growth rate curves at comparable prices can be detected. This can be explained both by the fact that it is only the initial survey period, and in that period the economy was less stable. During the later time intervals these curves correlate well, that is the information from the questionnaire predicts the rise and slowing down of GDP growth rates precisely enough.

Usage of synthetic indicator for construction to forecast the ratios of GDP change



6. The last approach of utilizing the business tendency surveys – revealing of economic development cycles with the help of qualitative and quantitative data. Its idea is that with the help of various cycle kinds (basic cycles, growth cycles, business cycles) the bending points are calculated and the tendencies of development of macro indicators are evaluated. The data of various kinds of business tendency surveys are usually used as cyclical indicators. This method is difficult to implement in Ukraine today in view of short time series of survey indicators. Starting with 2003, its experimental introduction is possible, as the survey figures for 5 years are already accumulated, which is the minimum required series length for the methods alike.
