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COMPILATION OF QUARTERLY ACCOUNTS IN POLAND

Working paper submitted by Statistics Poland*

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GENERAL NOTES

1. Quarterly accounts of gross domestic product (GDP) constitute an integral part of the national accounts system. They are the basis for the ongoing monitoring and analysis of the short-term movements of the national economy. They are also used to prepare preliminary annual estimates of GDP one month after the studied year.
2. The same principles, definitions and methods that are used to prepare annual accounts are also used to prepare quarterly accounts. The difference results only from the availability of data sources in quarterly periods: statistical and administrative. Also, quarterly accounts tend to rely more heavily on expert opinion.
3. At present, GDP by quarters is estimated using the direct method. In future, however, when certain conditions are met, the indirect method may be used to supplement the direct method.
4. The first experimental estimates of the quarterly GDP were made in 1996. They covered the period 1992 – 1996, both at current prices and at average prices of the previous year, but using only production approach. These results were published in 1997. At the same time the work on developing the method of GDP estimation by expenditure approach was conducted. In effect, the second publication on quarterly GDP for the years 1995-1997, issued in 1998, included full sequence of accounts from both sides, and also the detail description of sources and used methods. The decision to produce the quarterly data starting from 1995 has two main reasons: firstly - estimates for the years 1992 – 1994 are less reliable than for other periods; secondly – resulting from the first reason – at the Task Force meetings for candidate countries, Eurostat agreed that all revisions connected with improving the quality of annual accounts will be done from 1995.
5. The scope of publication of quarterly accounts is more or less covered with that required by ESA questionnaire.
6. Time and form of presenting quarterly GDP: the first time quarterly GDP is presented at a press conference, usually 80 days after the end of the reference quarter, and published in the monthly Statistical Bulletin of CSO. Also, a special note with short description and enclosed tables is disseminated to all users at the same time: ministries, institutes, journalists, international organisations etc. Once a year, in September, CSO issues the publication on quarterly accounts of GDP.
7. Up to now CSO does not estimate seasonally adjusted quarterly GDP. Only the raw data are produced and published.

ORGANISATION OF QUARTERLY ACCOUNTS ESTIMATES

8. The compilation of quarterly accounts of GDP is calculated in National Accounts and Finance

Division by the specially created for this purpose section on quarterly accounts. At the beginning, the section counted 5 persons (including head of section), of which 3 persons were students. Nowadays, the structure of this section has been changed. The section consists of 6 persons, but only 3 of them are directly engaged in quarterly estimates. The work of this small group is fully computerised. In its work, the group uses specially prepared sheets in Excel with a number of commands which transform the quarterly reported data (e.g. for big and medium enterprises) that are transmitted from other divisions in the C.S.O. Separate Excel sheets are used for data which are available only for the year (e.g. for small enterprises) or only for the total economy, or the coverage of the information for quarters is less than for the total year (e.g. state and local budgets data).

9. The application of PC with suitable software allows us to eliminate almost all manual calculations which are very time-consuming and work-consuming. It also allows the production of estimates of quarterly GDP by this small group. However, it requires adequately prepared staff, not only with knowledge of system of national accounts but also with good computer skills.

DATA SOURCES

10. From the *production side* the major sources of information for GDP quarterly estimates are:

- for non-financial corporations - quarterly reports on income, costs and financial results (F-01) and representative monthly report on sales and employment (DG-1);
- for financial institutions and insurance companies - quarterly and semi-annual questionnaires (F-01/b, F-01/u, F-01/m);
- for non-market sector - financial reports of Ministry of Finance on income and expenses of state and local budgets.

11. Based on information received from the reports listed above, the gross output, intermediate consumption and gross value added according to the NACE rev.1 sections and divisions are estimated. However, because of insufficient data, additional estimates have to be done on the basis of value of income from sales, incurred costs, number of employees and number of units from the REGON system, and also on the basis of the analysis of changes in these values over the previous year.

12. The estimates of gross value added are made according to the category of the size of unit. The size of the unit is determined by the number of employees. Based on this, three categories are distinguished: big units with more than 50 employees in sections C and D of NACE, and 20 in the remaining sections; medium size units with 6 to 50 employees in sections C and D and 6 to 20 in remaining sections, and small units with up to 5 employees.

13. In the case of big units, the quarterly estimates of gross value added are relatively simple; they are based, almost entirely on F-01 reports. The F-01 reports are the source of information about

income from product sales and trade margin. They also provide information about different kinds of costs, which constitute intermediate consumption.

14. Medium size units prepare monthly business reports DG-1 (representative sample) as well as semi-annual and annual reports F-01 on income, costs and financial results.

15. DG-1 reports and semi-annual F-01 (for 1st and 3rd quarters only big units are studied) reports constitute the basis for calculating value added for medium sized units in quarterly periods. DG-1 is also the basis for determining the overall income from product sale. F-01 is the basis for determining the structure of income, the relationship between income and costs and the overall size of costs and their structure, that is all the elements that are necessary for calculating the level and the structure of gross output and intermediate consumption.

16. The most difficult is to calculate the estimates of value added for small units. Data about small units come from the representative sample report SP-3 that is collected once a year. The basis for the estimates is information about the number of employed and productivity in medium size and big units, within the same section (division) of activity.

17. The number of employed in small units is established on the basis of files, from the REGON system. The REGON system is regularly updated and reflects the ongoing registrations and deregistrations of firms. The quarterly accounts use information about the number of employed and the number of firms at the end of the quarter. However, to calculate gross value added on yearly basis, information on the above mentioned structure of sales, the sales-cost ratio, and the structure of costs by type is needed. This data is obtained on the basis of information about units which are as close in size as possible to the small firms, these are the medium size units which submit the F-01 reports. The quarterly calculations that have been recently prepared use the structure and the relations contained in the reports submitted by medium size units. In quarterly periods, the estimates of gross value added in small business are prepared in similar way as those for medium size firms.

18. Each division and section of the NACE, rev.1, particularly the general government sector, NPISHs sector, financial corporations, requires individual approach. Other sectors are also treated individually, sometimes it depends on the kind of activity (e. g. agriculture) or specificity of information (e. g. forestry, fishing).

19. Gross value added is calculated at basic prices, and GDP is calculated at market prices.

20. From the expenditure side the estimates are based on the following internal and external sources of information:

- retail sales and wholesale of commodities,
- household budget survey (HBS) and labour force survey (LFS),
- quarterly reports of financial institutions (banks and brokers' houses), and insurance

- companies,
- data on wages and salaries, payments from profits for distributions and social benefits, prepared by the Labour Statistics Division of CSO, published in the monthly *Statistical Bulletin* of CSO,
- data about foreign trade balance, prepared by the Production and Services Statistics Division of CSO,
- quarterly data on the state budget and communal budgets,
- data about the Deputies' and Senators' per diems, obtained from the offices of the Parliament (Sejm and Senat),
- data from Agricultural Social Insurance Bank (KRUS) and Social Insurance Institution (ZUS), and
- experts' assessment and own estimates.

21. The estimates of individual consumption expenditures are based on information about the value of retail sales and wholesale sales. As a supplementary approach, the elements of distribution of GDP are calculated based on separately estimated gross disposable income of households and savings, which enables making estimates of the individual consumption expenditure of households and, indirectly of the government final consumption expenditure and final consumption expenditure of NPISHs.

22. For quarterly periods the elements of gross capital formation and foreign trade balance are estimated separately.

THE REVISION POLICY

23. For establishing the number of the revisions of the quarterly accounts two important aspects are taken into accounts: the possibility of using more complete data sources and reconciliation with the annual accounts. Usually the revisions are made twice a year. First revision is made 6 months after the studied year when the second version of GDP for this year is estimated and published in Concise Statistical Yearbook of Poland. The second one is made when the final version of annual accounts is available, i.e. about 1 year after the end of the studied year.

FUTURE WORK

24. As it was mentioned earlier, only the raw quarterly accounts of GDP are estimated. This year we plan to elaborate the seasonally adjusted data. In 2002, it may be possible to publish both sets of data, raw and adjusted.

25. The second area is to find solutions to put into practice some econometric methods to estimate certain indicators for which no data sources are available on quarterly basis, but this work is planned for the next 2-3 years.
