ASSOCIATION DE COMPTABILITÉ NATIONALE
Paris, 21-23 January 2004

Sources of data and methods of reconciling them in the national accounts of the EU countries

Eurostat – C1

A simple introduction

The concepts of the Systems of National Accounts (SNA and ESA) are so arranged that Gross Domestic Product is simultaneously equal to the value added generated in production, to the distribution of the value added as remuneration of the factors of production and to the final expenditure on the goods and services.

Firstly, for each producer, for each industry and for the economy as a whole, value added is defined as the difference between the value of output of goods and services in the period and the value of the goods and services used up as intermediate consumption in that production process. Secondly, that value added is distributed as compensation of employees, taxes to government, interest to creditors, dividends to shareholders and (hopefully) some is left as profit. Thirdly, total value added in creating goods and services equals the final expenditures on those goods and services: final consumption of households non-profit institutions and government, gross fixed capital formation and additions to inventories, exports, *less* imports.

In theory statisticians could have complete, reliable, independent sources for all of these components of output, expenditure and income. A wide variety of statistical but also administrative sources are indeed used in compiling national accounts:

- Statistics - structural business survey, household budget survey, external trade statistics, investment surveys etc
- Tax records - personal income tax, company profits tax, VAT, social security
- Administrative sources - there is a very wide range of administrative sources ranging from building permits to financial supervision
- Company accounts - centralised company account information is sometimes used as the basis of national accounts, so long as it is sufficiently complete and standardised in its presentation and its concepts.

These different sources need to be integrated in the system of national accounts in order to obtain one consistent system (and one measure of GDP). There are various methods of integration used by the EU Member States, varying from detailed product balancing to more macro-oriented approaches.

This paper will give an overview of the sources and integration methods that are currently used by the EU countries, and will try to draw some conclusions on the underlying developments in the national accounts systems.

Many similarities, but many differences too in national practices in the EU

Below, short summaries are given of the current main approaches to GDP/GNI estimation in the 15 Member States and Norway and Iceland. The information is based on the descriptions given by each country in the "GNI (ESA95) Inventory of Sources and Methods", which are detailed documents prepared by each country in the context of the verification of GNI for purposes of the EU own resources. Additional information was obtained in visits to the Member States that Eurostat undertook in the past two years to analyse these Inventories.

The texts of the inventories are being progressively placed on Eurostat's CIRCA web site and can be consulted (in English) at

http://forum.europa.eu.int/Public/irc/dsis/pnb/library?l=/national_product/inventoriesspublic&vm=detailed&sb=Title

Austria

Austria uses the production and expenditure approaches to calculate GDP, with the production approach being the more dominant method. Estimates for the income approach are also produced, but do not form an independent approach to GDP due to the fact that operating surplus and mixed income are determined as a residual. Calculations for the production and expenditure approach have so far been combined in a mostly manual balancing process. However, Austria is currently moving towards balancing through a supply-and-use frame work that covers generally 75 products and industries (with some of the information available at a much more detailed level).

Calculations for the production approach are based on a variety of sources. The main source for the 1995 base year estimates are the non-agricultural sector censuses of 1995, which are full surveys of all activities except agriculture, forestry and non-market producers. Subsequent years are covered by sources such as annual output and structure surveys, annual VAT-statistics, monthly business surveys in the production industry, statistics from supervisory authorities for banks and insurances, and annual reports of large enterprises. Estimates for real estate activities are based on housing census and quarterly micro-census data. Figures for non-market producers are calculated from government accounts and direct information provided by relevant units (churches, trade unions, parties, hospitals, nurseries, homes, etc.). Agriculture and forestry are compiled with a price x quantity approach using statistics on agricultural output.

On the expenditure side, final consumption expenditure of households and gross capital formation are mostly based on commodity flow methods. Main sources are production and foreign trade statistics, supplemented by motor vehicle statistics and housing construction statistics. Final consumption expenditure of general government is derived from government accounts and final consumption expenditure of NPISHs from a variety of sources, mostly directly from large organisations. The calculation of imports and exports is based on the official balance of payments statistics of the Austrian national bank and on the foreign trade statistics compiled by Statistik Austria.

Belgium

GNP/GNI for Belgium is calculated in an integrated supply/use approach. The production approach is based to a large extent on the information from the standardised annual accounts of enterprises, collected by the "Centrale de Bilans" of the Belgian National Bank The structural business survey is complementary to the business accounts, and is used mainly to fill in gaps of the accounts and to provide structural information on products produced and consumed.

On the business accounts, a series of adjustments are made to bring the data in line with ESA95. The adjustments are often based on the structural business survey, or on detailed accounting data. Also, explicit hidden economy adjustments are added to this.

There are enterprises for which no usable accounting information is available. For these, VAT data (for turnover) and/or social security data (for wages) are used. The data are also broken down to a detailed regional level (the level of "arrondissements"). At this detailed level plausibility and consistency checks of the data from different sources are carried out, which feed back to the national level.

The expenditure approach is independent to a considerable extent, due to the use of the household budget survey, the structural business survey (for GFCF) and foreign trade/balance of payments data. The income approach is basically residually determined. The supply and use tables contain about 320 products and 120 industries.

Denmark

The Danish national accounts are based on an integrated supply-use system. All three approaches are initially estimated separately. However, as the system is integrated, allowances, adjustments and initial balancing of sub-systems are made at various stages of the compilation process. Hence, the estimates according to the three approaches do not differ much prior to the final integrated balancing.

The main sources for the output approach include detailed accounting statistics for corporations (SBS) which to a significant extent are based directly on the business accounts (companies can choose between filling in the questionnaire and sending their business accounts to Statistics Denmark). The role of detailed tax files as a source has changed markedly in the past decade. At the end of the 1980s a major move occurred away from surveys and towards using tax files. The level of detail in the tax sources was, however, significantly reduced in the early 1990s in a desire to reduce the administrative burden on enterprises. Detailed surveys were thus gradually re-introduced in recent years. The accounts for all levels of government are available electronically. As in other countries, some components of value added are derived from price times quantity methods (e.g. in agriculture, housing, own account software etc.). The initial output-based estimate of value added and GDP is based on 810 industries.

From the expenditure side the initial estimate for final consumption expenditure is mainly based on retail sales statistics, household budget survey and government accounts. Capital formation is estimated based on various sources, including price times quantity methods for a part of construction and the commodity flow method for machinery and equipment. In Denmark, settlement statistics are still available (a new

questionnaire-based system is currently being implemented) which is the dominant source for imports and exports of services. Changes in inventories are not derived residually but from observed data.

The income approach is only fully independent for compensation of employees for which a separate source is available, in addition to the accounting statistics mentioned above.

The final balancing of the result of all three approaches is done in a detailed supply-use system at a level of 130 industries and 2 750 products. In several respects the Danish system for the final annual accounts is quite similar to the French system.

Finland

Finland introduced supply/use balancing in their revision of which the results were published early 2003. The supply and use tables contain about 950 products and 100 industries. The production approach is primary in calculating GDP, but the expenditure approach also plays an important role. The income approach plays no role, because gross operating surplus is calculated as a residual.

Main data sources for the production approach for market producers and own-account producers are the structural business statistics and the business register. Main data sources for other non-market producers are local and central government accounting statistics. The household budget survey plays an important role for estimating household final consumption, but many other sources are used too. Structural business statistics are the primary source for gross fixed capital formation.

Statistical discrepancies between output and expenditure may appear for preliminary data.

France

The French national accounts are based on an integrated system. The production, expenditure and income approaches are implemented independently. For the annual accounts, the final balancing is made with a joint supply-use and input-output framework using 118 industries/branches and 118 product groups. For the balancing, also the income is transposed from institutional sectors into the 118 branches of the input-output tables. For the base years the three approaches are more strictly integrated at different stages in the compilation process (and therefore less independent at the final balancing stage). The quarterly accounts also use the input-output framework.

The main sources for the output approach include for non-financial corporations both tax and survey data (SBS and other surveys) that are pre-integrated and aggregated into an intermediate system for enterprises (the *système intermédiaire d'entreprises*) which also includes sole proprietors. For government the detailed government accounting information is used. For financial corporations the data come from the supervisory bodies (*Banque de France* and others). Some components of value added are derived directly from satellite accounts (e.g. agriculture or housing services).

From the expenditure side the initial estimates for final consumption expenditure are mainly based on retail sales statistics, government accounts, household budget surveys, household panels, etc. The product balances of the supply-use tables play a significant role here (this is done at a level of 700 products). The balance of payments was an important source for estimating the tourism balance. Since the introduction of the euro, surveys among tourists and other sources (incl. use of credit cards) are used. Specific calculations are used for a number of products (motor vehicles, motor fuels, housing services, etc.).

Capital formation is based on various sources, including the tax and survey data for non-financial corporations, specific sources for financial corporations (including an annual survey among leasing corporations) and agriculture, and government accounts. Some components (in particular purchases of new dwellings by households) are identified using a commodity flow method.

The income approach is independent to a significant degree, not just for compensation of employees and other taxes on production but also for a part of the operating surplus (incl. mixed income), which for the non-financial corporations is independently estimated based on the data in the intermediate system for enterprises.

Germany

Germany uses the production and expenditure approaches to GDP. The income approach does not play a significant role in the determination of the GDP-level, due to missing data on entrepreneurial income. In the production and expenditure approaches, the calculations are performed in a largely autonomous way and are combined in an iterative balancing process at the aggregate level. A detailed product-related comparison is also performed as part of the separate input-output account, the results of which are taken into account in the GDP calculation, primarily for major revisions. Final GDP is usually closer to the expenditure approach than to the production approach (the former one being usually higher).

The mainstay of the production approach is structural business statistics in most industries (in particular manufacturing, wholesale and retail trade and most transport sectors). Apart from agriculture and finance, in most other areas of the corporate sector VAT statistics are used as a source of data for calculating output, especially in the area of other service activities (new surveys for the services industries have been introduced). Data from the government statistics can be used for calculating gross value added and output for the general government sector.

In addition to this system of annual surveys, surveys at intervals of several years are also used for the national accounts; this takes place mainly in the context of large-scale revisions of the national accounts.. Examples of such surveys include the 1987 population, employment, building, housing and workplace census, the 1993 wholesale, retail, hotels and restaurants census or the 1995 trades and crafts census.

Intermediate consumption for many branches is based on cost structure surveys (either annual or four-yearly).

At the expenditure side, government final consumption expenditure is derived from public finance statistics. Exports and imports are based on foreign trade data as well

as balance of payments statistics. GFCF figures are compiled applying a commodity flow approach, using data on the type of construction work carried out and data on the detailed output of industries by commodity group. GFCF data are cross-checked against data from investors where possible. Private consumption expenditure is derived in a combined process, mainly using survey data on the sales of retailers to private households as well as commodity related figures on rents, cars, tobacco or petrol. The household budget survey (which is five-yearly) is mostly used for plausibility checks. Moreover, at least for the base years the estimates are cross-checked against the figures from the separate input-output-accounts.

Greece

Greece uses the production and expenditure approaches to calculate GDP. Estimates for the income approach are also produced, but do not form a fully independent approach to GDP due to the fact that operating surplus and mixed income can only be determined as a residual. Results are compiled and balanced in a supply-and-use framework consisting of 380 products and 115 industries.

The production approach is largely based on business surveys, government accounts, agricultural production statistics, ad-hoc surveys and specific studies. On the expenditure side, household final consumption is based on the household budget survey. Gross capital formation is mostly calculated from the demand side using business surveys. Government accounts, foreign trade statistics and balance of payments data are the main sources for the other components of the expenditure approach.

Iceland

The main feature of Icelandic national accounts is their reliance on administrative data. Most frequently these data are collected for purposes other than statistical ones, like taxation. Direct inquiries hardly exist but the processing of tax assessment data both on a sample basis and using the total population is the most common procedure.

Of the three basic approaches to estimating Gross Domestic Product the expenditure approach has been the dominant one in Iceland during the last four to five decades. The production approach has been applied simultaneously from 1973 onwards, and the importance of that approach is gradually increasing. Both methods were applied more or less independently with the consequences that a statistical discrepancy occurred, as described in chapter 6. That discrepancy was presented as a balancing item on the output side which meant that the level of GDP was determined by the expenditure approach. From 1997 the two methods were reconciled, by using supply and use tables, and the statistical discrepancy eliminated.

The third approach to estimate GDP, the income approach, has not been implemented in Iceland. However, Statistics Iceland is now working on institutional sectoring using the main components of GDP from the other two approaches.

Ireland

Ireland calculates current price annual GDP from both the income and the expenditure approaches. At present there is no output approach and therefore no supply/use

balancing system, but there are plans to develop these in the next few years. The level of GDP is determined as the simple average of GDP from income and expenditure approaches.

Ireland has historically used the income approach. This is largely due to the availability of detailed information on company activities from tax records for both corporations and unincorporated enterprises. Also Ireland has good quality data on labour input and wages for the estimation of compensation of employees.

The expenditure approach has been developed more recently both as a cross-check on the income approach and as a useful data source in its own right. The main methods data sources are government records, household budget surveys, commodity-flow type methods and trade data.

Given the importance of Foreign Direct Investment in Ireland, cross-border property income flows are large and GNI is significantly lower than GDP. Ireland has developed a detailed system of questionnaires to collect the necessary data from multinationals, and has an integrated approach for major multinationals so that data reported by the same company on different statistical questionnaires are cross-checked before they enter the national accounts system.

Italy

Italy balances the GDP from the output and expenditure approaches in an input-output table. The output approach is considered the main one, the expenditure being secondary. Italy also produces an income approach, but the gross operating surplus/mixed income is calculated residually and therefore it does not establish the GDP level. A 101-way input-output table is produced annually, and reduced for publication to 92 branches in benchmark year and 50 branches in current years. The table is balanced semi-automatically with a Stone-Champerowne-Meade algorithm. The algorithm takes account of the assumed accuracy of each aggregate entering into the balancing process.

The sources and methods used for the output approach are, for market producers, business surveys (Structural Business Statistics, PRODCOM and others) or business censuses. Figures coming from regulators or supervisory bodies are used for financial activities, energy and railway transport. Some industries use “prices x quantity” methods. Other estimation methods are used residually for construction, trade & transport margins, owner-occupied dwellings, domestic services, etc. As for the non-market producers (Government and NPISH), the figures come from administrative information and are reclassified by NACE.

The estimates for non-financial producers in most (not all) activities, are grossed up to take account of informal economy, captured through non-regular labour force, after the so-called “Italian method”. This method is used for about 70% of the total value added. The estimates of regular and non-regular labour are produced in the national accounts department, after an arduous complicated process. The estimates from financial producers, Government and exceptionally some activities of non-financial producers are not adjusted for informal labour economy.

For the expenditure approach, different estimation methods and sources for each aggregate are used. For household final consumption estimates are based on household surveys (mainly the Household Budget Survey), other ISTAT expenditure surveys, administrative sources and the commodity-flow method. Estimates are produced by COICOP and later rearranged by NACE for balancing with the supply side.

For gross fixed capital formation estimates are derived from observable production (construction) or producers (transport means, equipment). Special estimation methods are used for intangible assets. For imports and exports estimates are based on foreign trade statistics and balance of payments.

Luxembourg

Luxembourg uses an integrated supply-use system where the output approach tends to dominate for determining GDP. The balancing is made at a level of 135 industries and 270 products for the final as well as the provisional accounts.

The economy of Luxembourg is remarkable in several respects which has an impact on the importance of different sources. For example, imports as well as exports are larger than GDP. Property income flows from as well as to the rest of the world are three times larger than GDP. One third of compensation of employees is paid to cross-border workers. Cross-border workers have a significant share in the final consumption on Luxembourg territory (e.g. restaurants, retailers). Taxes on products (e.g., on motor fuels or tobacco) are low and sales on Luxembourg territory are sensitive to the tax differentials with neighbouring countries.

The main sources for the output approach include the structural business statistics, the business accounts of large corporations and the government accounts. Business accounts statistics are directly available from supervisory bodies for e.g. financial services and hospitals.

Final consumption of resident households on the territory and abroad is based on the HBS. Special surveys among cross-border workers are used to determine their purchases in Luxembourg. This is integrated with retail statistics and the commodity flow method. For some products (e.g. motor fuels) special annual calculations are made. Capital formation comes from the SBS and from specific investment surveys (e.g. among financial corporations).

Many final consumption goods are exclusively imported whereas many large companies export most of their output. The balance of payments is not widely used due to the particular situation of Luxembourg. E.g., imports and exports of services are directly taken from business surveys. The tourism balances are determined as described above.

An independent social security source is available for compensation of employees by industry. These data are integrated with the compensation of employees data from the SBS and other surveys at an early stage in the compilation process. Therefore, the income approach plays no direct role in the evaluation of GDP.

Netherlands

The Dutch National Accounts are based on an integrated supply-and-use system in which the level of GDP is determined from the production and the expenditure side. The income approach is also significant, although less with regard to the level of GDP than the compilation of industry/sector cross-tables. Final estimates of supply and use tables are compiled at a very detailed level, covering some 250 industries and 800 product groups (at publication level 150 industries and 600 product groups). Provisional estimates relate to 100 industries and 250 product groups. Balancing of the supply and use tables takes place simultaneously for data in current and previous year's prices.

On the production side, the main source for industrial output estimates are annual production statistics, which provide fairly detailed information on products sold. These data are surveyed on a quarterly basis in the case of manufacturing. Intermediate consumption information varies considerably between activities, with manufacturing being covered in far greater detail than most other industries. Most of this information is provided in current prices. Those elements of the economy that are not covered by annual statistics are estimated by alternative means - for example, by gathering data on employment and the compensation of employees or information from professional associations. The use side of the latter's accounts are estimated by reference to data from comparable activities. Agriculture is based on volume data on agricultural production.

On the expenditure side, household budget surveys, retail sales statistics and government finance statistics are important sources for final consumption estimates. As for gross fixed capital formation surveys of investments provide information by economic sector. Manufacturing statistics are fairly detailed and even provide some capital stock data. Calculations for imports and exports are based on foreign trade statistics, production statistics, balance of payments and other internal and external sources (e.g. commodity boards, maritime and aircraft registers, tourism statistics, etc).

Norway

Norwegian national accounts have always been strongly focussed on the production approach in combination with the commodity flow method. The accounts are balanced in detailed supply and use tables (1000 products, 150 industries). The income approach plays a minor role (operating surplus is a balancing item), but may become more important with the continuous development of complete and integrated institutional sector accounts.

Generally, sources are a mix of administrative records and statistical surveys. Main sources for the production approach are the structural business statistics (mainly for manufacturing, but increasingly for services as well). For household final consumption, the budget survey is increasingly used, besides retail trade statistics and the commodity flow method. Structural business statistics also give information on gross fixed capital formation, which is mainly estimated from the demand side.

Portugal

Portugal compiles current price annual GDP from production and expenditure approaches, reconciled in a supply/use framework (451 products and 60 branches). The production approach has traditionally been the dominant approach, and is largely based on business surveys and government records. The expenditure approach relies quite heavily on the commodity flow method for a significant proportion of household final consumption and gross fixed capital formation, though there are also household budget survey, government accounts, and foreign trade data.

Spain

Spain uses the production and expenditure approaches to calculate GDP. Estimates for the income approach are also produced, but do not form a fully independent approach to GDP due to the fact that operating surplus and mixed income can only be determined as a residual. The different approaches are balanced and validated in a supply-and-use framework consisting of 200 products and 100 industries (publication level 110 products and 73 branches).

Calculations for the production approach are based on a multitude of different sources. Estimates for industry, including energy, and construction are largely derived from annual Industrial Surveys (of Companies, Production, and Consumption and Investment) and an annual structural survey of construction. Information from these surveys is supplemented with specific sources (annual reports etc.). Service activities are currently based on a big range of different specific statistics, ad-hoc studies, and other sources, which will, to a large part, soon be replaced by integrating the new Spanish Service Survey covering NACE sections G, H, I, K, O in National Accounts compilations. It is worth noting that business surveys in Spain generally correspond to the classifications of the Spanish General Accounting Plan, allowing companies to directly transfer information from their accounts to the statistical questionnaires. Financial intermediation is covered by banking statistics from the Bank of Spain and data from the insurance supervisory authority. Non-market activities are based on government accounts and specific studies and statistics. Estimates for agriculture, forestry and fishing are mostly derived from a price x quantity approach using agricultural and fishing statistics.

Estimates for the expenditure approach also come from many different sources. Final consumption expenditure of households is based on household budget surveys, retail trade surveys, population and housing censuses, education and health statistics, transport statistics and a range of supplementary sources. Final consumption of NPISH and government is covered by a specific study and government accounts respectively. Calculation of gross fixed capital formation follows a commodity flow approach which uses various sources on production and which is cross-checked against demand figures. Exports and imports are based on foreign trade statistics and the balance of payments.

Sweden

Sweden applies both the output and expenditure approaches in the national accounts (there is also an income approach but operating surplus is a residual). There is a supply/use system in place, which enables major reconciliation; though at present the system is not fully balanced (there remains a small residual). The supply/use system

also includes constant price figures, and industry-level figures, which both make a contribution to the reconciliation process.

Sweden has traditionally relied on the expenditure approach to determine the level of current price annual GDP. This is because the information sources – household budget surveys, administrative sources, government accounts, investment surveys, and foreign trade statistics – are considered to be of high quality and completeness. Sweden has however indicated that the data sources for the output approach (largely business surveys and accounting records) have improved significantly in recent years, and this will probably lead to a greater weight being placed on the output approach, and to a fully balanced supply/use system

United Kingdom

In the United Kingdom the annual estimates of GDP are obtained from the production, income and expenditure approaches and reconciled using supply and use tables containing 123 industries and products. Since supply/use balancing is not yet used for provisional accounts (published in t+1), for quarterly and provisional data statistical discrepancies (between output, expenditure and income approaches) are shown.

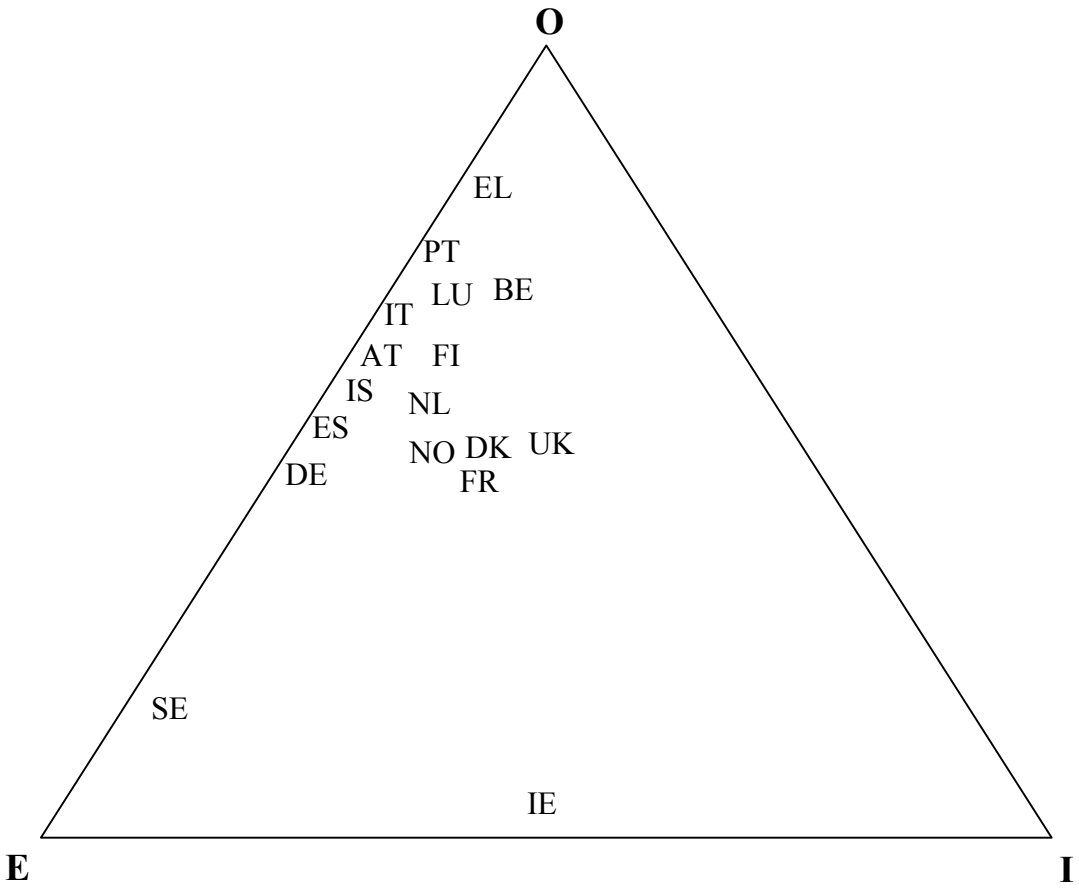
Each of the three measures of GDP is estimated, as far as possible, using different data sources. The major sources for the production approach are National Statistics (NS) annual inquiries. The most important of these is the new Annual Business Inquiry, which replaced (in 1998) the separate production, construction, service and distribution inquiries previously sent to businesses. These survey data are supplemented by a number of other sources, notably agriculture data supplied by Ministry of Agriculture, Fisheries and Food and general government non-market data from administrative systems.

As almost all income (whether personal income or company profits) are subject to tax, the estimates for the income approach are derived largely from data collected by the Inland Revenue for tax purposes. The estimates are also supplemented by a number of other sources, notably Bank of England and NS surveys for the corporations sector.

The expenditure measure is estimated from a wide variety of NS surveys (e.g. Family Expenditure Survey, Retail Sales Inquiry and International Trade in Services Inquiry), government internal accounting systems and HM Customs and Excise data on import/export of goods. Gross fixed capital formation is estimated from a number of sources, principally NS Quarterly Capital Expenditure Inquiry and ABI supplemented by Department of the Environment, Transport and the Regions estimates of construction assets.

Synoptic presentation

A simple diagrammatic summary presentation was developed by Eurostat (Magniez, Coin) in the early 1990s. The triangle has three corners O, E and I corresponding to the Output, Expenditure and Income approaches to estimating GDP. A country that used all three approaches equally would be in the middle of the triangle; one that used primarily the output approach, balanced against expenditure but where the output approach dominated would be on the edge O-E nearer to O than E and so on.



The criteria used to fill in this triangle are

1) are there independent sources for the different approaches? (The effect of different shares of imports – large for small countries etc. – is ignored)

2) what is the share of the approaches in the balancing? (It is assumed that when independent sources are available for an approach, this will have an impact on quality even if in the final balancing that approach (e.g. income) is ignored.)

Conclusion

Most countries use output and expenditure sources, reconciled in a supply and use table at a fairly detailed level. In some countries the output approach tends to dominate, in others, such as Sweden, the expenditure approach is more dominant. Only in Ireland does the income approach play a dominant role, but even there work is in hand to substantially reinforce the output approach. In other countries income-side data is generally compiled for compensation of employees, but operating surplus is often derived as a residual, so this constitutes only a partial income approach. Only France and the UK seem to have an independent income approach in addition to output and expenditure.

For most countries the sources for the output and expenditure data are mainly statistical enquiries. Few countries, most notably France and Belgium, use a data base of company accounts to compile the national accounts. France additionally combines both administrative and statistical data, integrated at a micro (company) level.

Of course, everywhere, when companies respond to statistical enquiries they use data and concepts that are available in their internal company accounts. One interesting case is Denmark that moved strongly towards the use of administrative sources in the 1990s but where certain administrative sources subsequently disappeared forcing the statisticians to re-create statistical enquiries to collect the data.

Compared to the similar comparison done in the early 1990s several trends emerge, which are the result of 15 years work in the GNP Committee to ensure the reliability, comparability and exhaustiveness of the GNP data and also the introduction of ESA95 and the major benchmark revisions associated with that. For many countries, the output and expenditure approaches are now much more systematically reconciled at a detailed product level in a supply and use framework than was previously the case. There is much greater attention to ensuring the exhaustiveness of the figures by adding explicit or implicit adjustments to the basic sources to ensure that all economic activity that should be included actually is.

One consequence of the integration and balancing of the approaches at a detailed product or company level is that at the macro level the three approaches are becoming less independent – different methods dominating for different products - and therefore the precise placing of countries on the triangle becomes less certain.

There are still differences in approach used by the countries, who each individually seek to make the best use of the various statistical and administrative sources available to them, taking account of their relative strengths and weaknesses. However the national accounts approach of two or three independent sources reconciled, the convergence of methods achieved in Europe and the quality controls carried out by Eurostat and the GNP Committee, do actually ensure a satisfactory comparability of the final national accounts aggregates - especially GDP and GNI - between the countries.