

For Official Use

STD/NA/RD(99)5



Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

OLIS : 20-Sep-1999
Dist. : 21-Sep-1999

PARIS

STATISTICS DIRECTORATE

Or. Eng.

STD/NA/RD(99)5
For Official Use

National Accounts

SUMMARIES AND ISSUES FOR DISCUSSION

OECD MEETING OF NATIONAL ACCOUNTS EXPERTS

*Château de la Muette, Paris
21-24 September 1999
Beginning at 9:30 a.m. on the first day*

81637

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

Or. Eng.

**OECD MEETING OF NATIONAL ACCOUNTS EXPERTS:
SUMMARIES AND ISSUES FOR DISCUSSION**

Title of Paper: Proposal for a satellite account of household production

Reference: STD/NA(99)17

Summary:

Statistics Finland obtained Eurostat funding for this project which aims to develop a harmonised satellite system of household production and evaluate the quality and applicability of data from the Eurostat Time Use Pilot Survey for the calculation of unpaid household labour. The report of the project was published by Eurostat in June 1999¹. In this paper, a short overview of the report is provided.

A household production satellite account is a useful tool for the purposes of demonstrating the productive role of households alongside the market economy and the public sector. The Finnish report has addressed several key questions relating to the compilation of a satellite account and made a number of recommendations as to how these questions could be resolved. The recommendations have been made by taking into account both existing information needs and feasibility.

The purpose of a satellite account is to bring into a single integrated accounting system the goods and services produced by households for their own use: both those that are already included in the current accounting system and those that remain excluded from it. In addition, the satellite account takes in the volunteer work done by households for other institutional units without compensation, which is also largely excluded from the system of national accounts. Including all these items of household production into the satellite account provides a picture of the overall role of household production in the national economy. The inclusion of production both outside and within the ESA will ensure that the data are also comparable with countries which do not apply the European System of Accounts and which may use a different definition of production boundary.

It is recommended that household production be valued on the basis of production costs (using the input-based method). This recommendation is based primarily on the availability of the data needed for the satellite accounts and on the adequacy of the data provided by time use studies to measure work related to household production.

The biggest problems in compiling a production account relate to the valuation of work time. More comparative research is needed on the ratio of inputs and outputs in different domains of household production so that the correct hourly wage for valuing purposes can be determined. In the meantime, it is thought that the best option is to value labour on the basis of wages of housekeepers or other generalist household workers.

¹

29/07/99 Proposal for a Satellite Account of Household Production, Eurostat Working Papers, 9/1999/A4/11
21/05/1999 SC96L09

Issues for Discussion:

- Would it be better to develop output and input methods separately as parallel methods or should both methods be used in calculating the value of household production depending on the available data? For instance, providing nutrition and providing clothing might be based on the outputs and other functions based on inputs.
- Should return to capital be taken into account in calculating production costs; or should there be an element comparable to operating surplus included in inputs?

Should travel to work be regarded as a productive activity and included in the household satellite account, when provided by the household itself?

- Do you prefer gross or net wages and why?
- Should all capital goods of households be included in the capital stock, even if they are used in providing recreation or rest?

Title of Paper: The compilation of household sector accounts in Korea

Reference: STD/NA(99)18

Summary:

This paper discusses household sector accounts and human resource accounts for Korea (KORHRA) for 1990 and 1995. The household sector includes all economic data that are needed to analyse the impact of household and individual behaviour and policies of government to affect socio-demographic dimensions of the population. This paper presents the accounting framework for KORHRA as it relates to the 1993 SNA dealing with the household sector, but including satellite extensions on education. Several deviations from SNA concepts within the context of this satellite scheme are noted, including the concepts of actual final consumption of households and expenditures by enterprises on education. Compilation methodologies of survey data, data sources and final accounts are also presented. A discussion of preliminary results and their analyses are derived from three sources of data: expenditures by household and government on education as well as income of households from which those expenditures are made; value added by industries; and annual income and expenditures by educational level of household head.

Title of Paper: Satellite accounts in the UK - New developments

Reference: STD/NA(99)19

Summary:

Politicians in the UK have recently placed particular emphasis on the broad objectives of sustainable development. This emphasis has increased the profile of satellite accounts. This paper discusses three

main work areas that have been developed by the Office of National Statistics in response to these objectives as they relate to satellite accounts:

- The development of household accounts; the first stage is to estimate output measures for household production, notably the care of children and adults;
- Research of valuation of certain environmental accounts;
- Linking these and other satellite accounts by investigating conceptual frameworks and creating a joint data processing team and database.

Issues for Discussion:

- a) How is work on satellite accounts being organised in other countries?
 - b) Are people investigating linkages between the satellite accounts?
 - c) Would it be useful for the UK to host a meeting next year for OECD countries to compare notes on the handling of satellite accounts?
 - d) Comments on our work proposals for household accounts and the valuation of environmental accounts are also welcome.
-

Title of Paper: The measurement of non-life insurance output in the Australian national accounts

Reference: STD/NA(99)20

Summary:

The purpose of this paper is to describe the treatment that has been adopted in the Australian national accounts concerning the measurement of non-life insurance output. The paper notes two significant improvements that were introduced with the SNA93: the inclusion of premium supplements in the valuation of output and the adoption of accrual based measures of premiums earned and claims incurred in place of the former cash based measures of premiums and claims.

In seeking to implement the new SNA93 approach in the context of the measurement of non-life insurance output and to record the non-life insurance transfer flows in the secondary distribution of income accounts, national accountants in Australia were confronted by volatility in the annual estimates of non-life insurance output generated using the SNA93 approach. To overcome this problem, Australia made two elaborations. First, “claims incurred” was replaced by “expected claims”. Second, non-life insurance output was calculated by class of business, rather than at the aggregate level, which has an implication for sectoral estimates.

Issues for Discussion:

- Do participants agree with Australia's interpretation of SNA93 to justify the use of “expected claims” rather than claims incurred in calculating non-life insurance output?

- What is the most appropriate method of calculating “expected claims”?
 - Do participants agree with the proposition that non-life insurance service charges should be calculated at the class of business level to ensure the most appropriate allocation of these service charges by institutional sector?
 - What is the most appropriate method for calculating chain volume measures of insurance output?
-

Title of Paper: A volume index for the output of the Dutch banking industry based on quantity indicators: A pilot study for the period 1987-1995

Reference: STD/NA(99)21

Summary:

This study is the first in a series of attempts by Statistics Netherlands to find alternative indicators to deflate the production value of branches of the service industry in cases where deflation by standard methods is problematic.

Banking has been singled out since on the one hand it has a large value added while on the other hand the specific character of a large share of its production value (FISIM) rules out the standard deflation procedure. Consequently, less conventional methods are necessary here.

The production value of banking activities consists of two components: commissions and fees (direct payments for services) and FISIM; the latter being the largest part by far. Lacking directly observable and measurable prices, it is impossible to compose price indices of output in the usual way and to deflate FISIM with them. The only way left to construct a direct, independent volume index of FISIM is to derive it from quantity indicators of output. In principle, deflation of commissions should be comparable with deflation of other business services. However, in the Dutch practice deflators are not available, at least for the time being. In the short run, the only possibility left for improvement beyond input methods is to use quantity indicators.

Issues for Discussion:

- In the case where price data are not available, should the use of quantity indicators be considered a suitable approximation of the volume change of services?
 - Also in the case where data for the application of output methods are not perfect (e.g. banking), should output methods be preferred to input methods?
 - Labour productivity in the Dutch banking sector during the period 1987-1995: comparison of input and output methods.
-

Title of Paper: Accrual recording of interest: Is there a case for revising the 1993 SNA?

Reference: STD/NA(99)22

Summary:

This paper discusses and assesses three approaches that have emerged as a result of discussions concerning the revision of SNA93 recommendations related to accrual recording of interest. These approaches have come to be labelled the “debtor approach” (as reflected in SNA93), the “acquisition approach” (as reflected in BPM5), and the “creditor approach”. The label for the “debtor approach” is based on the view that debtors would exclusively be interested in the initial contract because they would only have to honour contractually agreed coupon payments (if any) and - at maturity - the redemption value, irrespective of the development of market interest rates and the market value of the security. On the other hand, creditors would be more interested in prevailing market conditions either at the moment of purchase (the acquisition approach) or on a continuing basis (the creditor approach). The paper concludes that the SNA93 decision should be retained because the proposed alternatives conflict with the SNA93 transaction concept and furthermore upset the basic distinction between volume changes and price changes.

Issues for Discussion:

- a) Should feasibility tip the balance in favour of either of these approaches?
-

Title of Paper: Accounting for interest on debt securities in Australia

Reference: STD/NA(99)23

Summary:

The matter of deciding upon an appropriate method for determining interest on debt securities in Australia’s national accounts and balance of payments statistics had been the subject of extensive debate within the Australian Bureau of Statistics. The method chosen was argued to be most consistent with the economics and accounting principles of the SNA and relatively straightforward in its application. Using this method, interest on tradable debt for any given period is calculated by multiplying the average market value of a stock outstanding during the period by the average prevailing interest rate during that period. This paper provides a discussion of the conceptual framework or criteria that were considered in the selection of this preferred method; namely that the method was consistent with the principles of current cost (market price) accounting; that its results were consistent with current economic behaviour; that symmetry existed between the recording of interest for the debtor and the creditor; and that the method exhibited no “unexplainable” flows in the reconciliation of opening and closing stocks for each period. The practical implications of this method are also considered, indicating that the implementation of the preferred method is far more effective in the Australian context than the debtor approach.

Title of Paper: The treatment of pension funds in the Australian national accounts

Reference: STD/NA(99)24

Summary:

In implementing SNA93, Australia was faced with deciding how to treat unfunded superannuation schemes for general government employees. Historically, unfunded schemes in the general government sector have been a significant component of the social security arrangements in Australia. This paper provides a historical background to the provision of superannuation and insurance schemes in Australia. Several SNA93 implementation issues regarding unfunded superannuation schemes are presented, namely the SNA93 suggestion that actual pension payments could be used as a proxy for employer contributions; the issue of whether the whole of accruing liability used to pay future benefits should be treated as compensation of employees or if two imputations (the other being interest on the estimated liability) should be made; the practical issue of treatment of changes to the estimated liability at the end of the financial year; and the treatment of transfers from a funded defined benefit scheme back to the employer from a fund in a surplus. The paper concludes that the assets and liabilities associated with unfunded pension schemes, at least where there is a high degree of certainty regarding the eventual payment of pensions, should be treated in a similar manner to funded schemes and recorded in the sectoral balance sheets.

Issues for Discussion:

- What is the logic behind SNA93's exclusion of the liabilities and assets of unfunded schemes from the sector balance sheets?
- Should an investment income flow be imputed in addition to imputed employer contributions for unfunded pension funds?
- How should revisions to the level of total outstanding liabilities for unfunded pensions be treated in the accounts?
- How should adjustments to contributions for defined benefit schemes be treated where a deficit or surplus has been identified and the employer has either made additional contributions, reduced contributions or taken money out of the fund to correct or reduce the imbalance?

Title of Paper: Consumer taxes and subsidies: Illustrative compilations for Australia

Reference: STD/NA(99)25

Summary:

The Australian Bureau of Statistics has compiled an illustrative satellite account for taxes and subsidies, based on a proposal put forward by Anne Harrison for discussion at the September 1998 meeting of national accounts experts. This paper presents the experimental recompilations of this illustrative satellite account by providing an overview of the satellite account proposal, including a comparative assessment of the SNA93, which does not recognise consumer subsidies or taxes on consumption, and an overview of

other data and auxiliary assumptions required to implement the proposal. The effect of the alternative treatment on key national accounting aggregates such as taxes, subsidies and consumption and GDP at production cost is also investigated; followed by an evaluation of the extent to which the satellite presentation of taxes and subsidies is more informative, intuitive or transparent than the SNA93 presentation within the context of shifts in models of service delivery and taxation mix.

Issues for Discussion:

- At the September 1998 meeting of national accounts experts, it was suggested that (contrary to ABS experience) the proposed satellite account could obscure analyses of differences or changes in the institutional arrangements for taxation and service provision. What analyses might be hindered?
 - Have any other agencies designed, compiled or planned any alternative presentations of consumer taxes and subsidies?
-

Title of Paper: Making services visible

Reference: STD/NA(99)26

Summary:

The issues of statistical visibility of services and possible alternative treatments of some classes of services are addressed in this paper, with the aim of exploiting the possibilities of alternative presentations and satellite accounts to give prominence to alternative perceptions about determining factors in the economy. An important type of service which may be evident in production statistics but not in final demand concerns services supplied to business. This paper espouses the desirability of the explicit identification in satellite accounts of services that are presently invisible either because they are classed as ancillary activities or because they are services demanded only as intermediate consumption and thus do not appear in the expenditure categories of GDP. Ancillary services can be identified explicitly in the accounts using two approaches: by identifying activities using ISIC, which assumes that there are no services that are only ancillary, or the more direct approach of identifying activities by function using COPP.

This paper presents alternative treatments or case studies for several aspects of the six divisions identified by COPP, namely outlays on research and development, environmental protection, marketing (advertising) and human resource development (health and education). More specifically, the first and most simple case presented looks to the consistent treatment of an activity that is part of intermediate consumption, such as transport; the second case allows for an alternative treatment of particular expenditure by corporations entered into voluntarily and which ultimately benefits other units, for example advertising in the form of sponsoring sporting or cultural activities; the third case examines expenditure imposed on corporations by government directive to meet governmental policy goals, for example via health and safety legislation or environmental protection controls; the fourth considers treating some other expenditures with long term benefits as capital formation, for example research and development or education expenditures; while the fifth considers what would be involved in extending the production boundary in the national accounts to include more services presently excluded, in particular household services. These five cases are examined using a prototypical example, thereafter providing a synthesis of the implications for the elements of the supply/demand balance and for constant price calculations. The paper concludes that the treatment of services is relevant also for measurement at constant prices since what was previously seen as a price increase may now be more appropriately handled as a volume increase.

Issues for Discussion:

- Is there a set of expenditure types, say in COPP, which it would be desirable to identify not as ancillary activities but as secondary products?
 - How do participants react to the concept of final consumption expenditure for corporations and social transfers in kind by them to either government or households?
 - Is it helpful to regard expenditures by corporations in response to government legislation as a form of collective consumption?
 - How do participants react to the idea of partitioning capital formation into three categories; enterprise, collective and individual?
 - Is it desirable to consider introducing a distinction between capital formation expenditure and actual capital formation analogous to the distinction for final consumption with a matching item for transfers between those units undertaking the expense and those benefiting from it?
-

Title of Paper: Aggregate real consumption and the cost-of-living: theory and measurement

Reference: STD/NA(99)27

Summary:

The paper presents a general theory for the measurement of welfare based on the concept of aggregate money metric utility (AMMU), defined as the sum of MMUs of individual households. It is demonstrated that AMMU is the theoretical measure implied by the most important empirical welfare measures: aggregate real consumption (ARC), the consumer price index (CPI) and the common triangular approximation to consumer surplus (CS). The theory leads to new measures of ARC which approximate AMMU quadratically. Unlike the chain measures recently introduced by the international statistical agencies in the context of the NIPAs, the proposed measure respects the additive identities. The approach is directly applicable also to the measurement of real GDP and of the other components. The new measure is based on the CS approximation. I correct and generalise Hick's proof of the quadratic approximation property of this measure and also derive the theoretically appropriate normalisation. This normalisation is at the same time the appropriate formula for the CPI.

Title of Paper: Are consumer price indices suitable for deflating GDP?

Reference: STD/NA(99)28

Summary:

The report of the Boskin Commission in the United States has stimulated a number of countries, including the United Kingdom, to review the principles and practices underlying their consumer price indices (CPI). The issues have been addressed in a number of papers, including Hill (1997) and Triplett (1999). In the

United Kingdom there is currently an extensive research programme into aspects of the UK CPI, which has generated discussion about whether it should be regarded as a cost of living index (COLI), at least in its theoretical framework. In addition, the development of the Harmonised Index of Consumer Prices (HICP) for EU countries has provided an additional family of price indices with somewhat different properties. While there continues to be animated debate among price statisticians, less attention tends to be focused on the consequences of this debate for the deflation of GDP. This paper aims to take a first step towards remedying this.

Broadly, a cost of living index is defined as the ratio of the minimum expenditures required to attain a particular indifference curve under two price regimes. In contrast, the UK CPI is regarded purely as an index of price changes in a closely defined basket of goods and services.

Some of the alternative approaches to constructing a CPI, either postulated or actually realised in the HICP, can have a significant impact on the individual indices used for deflation and hence on GDP growth rates. However the needs of national accountants are, understandably, not the highest priority of consumer price statisticians. Nevertheless good information about the rate of growth of the economy and the rate of inflation are both important for the purposes of economic policy. The onus by default is on national accountants to ensure that CPIs are fit for our purposes. This paper looks at the recommendations of SNA93 in respect of the measurement of volumes, and the implications for the use of CPIs as a family of deflators in the National Accounts. These are considered in the light of possible developments in CPIs, giving examples from United Kingdom practice. The paper concludes that, insofar as a cost of living index measures the cost of a particular level of welfare rather than of consumption, it is not an appropriate family of price indices for deflating components of GDP.

Title of Paper: On the deflation of the annual households final consumption matrix

Reference: STD/NA(99)29

Summary:

This paper is a methodological note on the deflation system constructed to estimate the household consumption in constant prices within the framework of the Italian National Accounts according to ESA95. The consumption matrix (CM) provides the starting point in the sense that it indicates (as cells of the matrix) the branch (economic activity sector) that produces an item and simultaneously its purpose (consumption function), so that every crossing between a branch and a function identifies a cell (i.e., there is a cell that refers to the medicines that are produced by the chemical industry and are used for medical treatment). This transition matrix represents the framework of the deflation system. In fact disaggregated indexes, corresponding to the matrix cells, are used to deflate each cell of the CM. The weighted deflators of the cells are then aggregated to calculate branches or purposes deflators. Deflators by branch have also been used to deflate the share of nominal output devoted to household consumption. In this paper, the process of computation of deflators is outlined, including the linkage of different price bases, aggregation of elementary price indexes to deflate the consumption matrix, cases of specific deflators used to deflate the CM, and computations of deflators by branches and purpose. The use of the consumption deflators by branch for computing constant price output is also discussed.

Title of Paper: Projecting PPPs to form time series

Reference: STD/NA(99)30

Summary:

There are now five sets of PPPs for OECD Member countries; 1980, 1985, 1990, 1993 and 1996. The paper contains a set of these results at main aggregate level for reference. In addition there is discussion about how PPPs for the intervening years can be calculated since a time series set of PPPs is desirable for many analysts wanting to make international comparisons in a common currency. Illustrative results for Austria are given as an example.

Issues for Discussion:

- In the past, PPPs have been projected to non-benchmark years at the level of GDP only. Is it thought useful to work at a slightly more disaggregated level such as the 12 items described here?
- In the past neither PPPs nor per capita GDP benchmark figures were revised once published. The introduction of the 1993 SNA means that revised per capita GDP figures must be calculated. Should the opportunity be taken of establishing that revisions to real volumes in international prices would automatically follow revisions to local currency data?

Title of Paper: Software estimates in the Netherlands 1986-1997

Reference: STD/NA(99)31

Summary:

The 1993 SNA and 1995 ESA extend the asset boundary of gross fixed capital formation to include intangible assets, most notably computer software. This paper presents the results of the estimation of gross fixed capital formation in software in the Netherlands, and discusses the difficulties encountered in implementing these new estimations into Dutch national accounts in direct compliance with the definitions of the ESA. The conceptual issues surrounding the estimation of gross fixed capital formation in software are first outlined, including definitions of software within the context of the ESA, software criteria and classifications, valuations and implementation in the Dutch national accounts. An analysis of measurement problems encountered in providing estimates for gross fixed capital formation from both the supply and demand side, in addition to the final balancing adjustments for purchased software are then given. Several points are highlighted that serve to illustrate that the estimation of gross fixed capital formation in software in the Netherlands is not straightforward: basic data does not permit the proper delineation between intermediate consumption and gross fixed capital formation; the one-year criterion and the small-tools rule are violated, giving rise to an overestimation; own account gross fixed capital formation is approximated by the wage costs of computer staff involved in the development of software; and constant price estimation of software is even more problematic.

Issues for Discussion:

- In the case of software, is harmonisation of concepts sufficient to attain international comparability, or should estimation procedures also be harmonised?
 - Both the 1993 SNA and the 1995 ESA serve two goals: (1) the compilation of internationally comparable national accounts data, and (2) the compilation of data that comply with the concepts of present economic theory. In a number of cases (e.g. intangible assets), these two goals do not coincide because of measurement problems. Looking at future revisions of the SNA/ESA, the question could be raised as to what should have priority for national accounts guidelines: compliance with economic theory or international comparability?
-

Title of Paper: Recognition of software as investment in the US national accounts

Reference: STD/NA(99)32

Summary:

In the August 1999 Survey of Current Business, the Bureau of Economic Analysis (BEA) described the major definitional and classificational changes that are to be made as part of the upcoming comprehensive, or benchmark, revision of the national income and product accounts (NIPAs) to be released October 28, 1999.²

One of the most significant changes to be made in this revision is that business and government expenditures for computer software will be recognised as fixed investment, beginning with 1959. Currently, except for software embedded in equipment by the producer of that equipment, business purchases and the costs associated with own-account production of software are classified as inputs to production, and government purchases and own-account production of software are classified as government consumption expenditures. (“Own-account” production refers to software produced by a business or government for its own use.)

Based on preliminary estimates for 1996, this change will increase GDP by about 1½ percent, or \$115 billion - about \$95 billion in private fixed investment and about \$20 billion in government consumption expenditures and gross investment.

The first section of this paper is excerpted from the Survey article. It details the changes to the accounts that will result from the new treatment for software. The second section is an expansion of the “Technical Note” from the article which describes the methodology that will be used to prepare the software estimates. A copy of the article may be found at BEA’s Internet website at <www.bea.doc.gov>.

Issues for Discussion:

- Coverage issues: Own-account production; software purchases reported by businesses as expenses; and large data bases.

² Brent R. Moulton, Robert P. Parker, and Eugene P. Seskin, “A Preview of the 1999 Comprehensive Revision of the National Income and Product Accounts: Definitional and Classificational Changes,” Survey of Current Business 79 (August 1999): 7-20.

- Methodology issues: Own-account production and price indexes.
 - Future research: International transactions; recording of licensing arrangements; Y2K expenditures.
 - SNA issues: Status of international comparability under SNA 93; adequacy of guidelines.
-

Title of Paper: A survey method to measure own-account produced software for Austria

Reference: STD/NA(99)33

Summary:

The extension of the production and asset boundary with respect to computer software was one of the major changes in the 1993 SNA. The extended definition of gross fixed capital formation regarding software gave rise to a new set of methodological and estimation problems, including the need to elaborate methods of estimation for in-house produced software. This paper provides an overview of three different methods used to estimate in-house produced software - by direct observation from company accounts, cost-side estimates based on assumed labour inputs, and special enterprise surveys - before discussing the methods and results of a special survey undertaken to measure the output of own-account produced software in Austria. The survey method was selected as other measurement instruments were not feasible. Even if only 13.4% of the enterprises reported producing own-account software, the survey results show that total own-account produced software equals about 40% of purchased software or 0.1% of GDP.

Title of Paper: A disaggregated estimate of gross capital formation by sector of origin and destination

Reference: STD/NA(99)34

Summary:

In 1999, for the first time in 25 years, the *Department of National Accounts and Economic Analysis* produced a flow-matrix of investments. It is a distribution matrix that permits the flow of investment goods from production to destination sectors. The definition and estimation of this flow-matrix appears to be very powerful because it is a basic tool for a detailed sectoral analysis; it constitutes the first step towards disaggregated estimates of capital stock. It also allows the estimation of gross capital formation by owner using information from both the supply and demand side, in addition to providing a check on reliability of investments by product using the information gathered directly from firms. In this paper we present a new method to estimate gross capital formation by owner using this flow-matrix of investments. The method presents important elements of innovation, namely the identification of all the intersectoral flows between branches and the simultaneous use of the whole information from the supply and demand side.

Title of Paper: Model for the cyclical trend in stocks in Belgium

Reference: STD/NA(99)35

Summary:

Changes in stocks have a significant influence on industrial output and economic growth. In the Belgian quarterly national accounts, this item is not estimated on the basis of exogenous variables but is simply taken as the difference between the aggregates obtained by the output approach and by the expenditure approach. To improve the estimate of this crucial economic variable, we should examine the possibility of validating this figure via other information sources, such as business surveys. This paper discusses the problems involved with using the results of business surveys as a quantitative instrument for measuring changes in stock. While business surveys can seek to update the link between changes in stock and economic activity, two apparently conflicting macroeconomic models on stock formation are proposed that provide an insight into stock formation behaviour: maintaining steady output, which justifies a counter-cyclical trend, and the stock accelerator, which explains a pro-cyclical trend. Our empirical study using the data from the Belgian quarterly national accounts reconciles these two approaches. Using an elementary model of the behaviour of stock formation based on quarterly data, we find that stocks keep output steady in the very short term and subsequently adopt accelerator behaviour. The latter predominates if annual data are used.

Title of Paper: Retrapolating Italian annual national accounts data according to ESA95

Reference: STD/NA(99)37

Summary:

The general revision of National Accounts according to ESA95 has involved the work of the Department of National Accounts and Economic Analysis of ISTAT during the years 1995-98. This paper summarises the main guidelines followed by ISTAT in the retrapolation of National Accounts data backwards to 1988. For the current revision, 1992 was assumed as the benchmark year. The key factors influencing the revision have been: a) the acquisition of the results from general census and from surveys on households and enterprises; b) the implementation of new and more accurate estimation methods; c) the application of the new ESA95 standards. The methodology adopted in estimating the new ESA95 accounts allows us to differentiate between the effects caused by the adoption of the new standards and those due to the revision of sources and estimation methods. The approach followed to reconstruct national accounts is different for the years after 1991 and before 1992. For the more recent years, the benchmark year methodology was used. For the previous years, reference indicators were widely used. These indicators result from the development of National Accounts series, constructed in accordance with ESA79, at the highest detailed level. Further remarkable information is provided by the level of 1982 (previous benchmark year) estimates.

Issues for Discussion:

- Are the differences between the new and the old time series for the different aggregates the same along the whole period 1988-97 or not?

- Are there important differences considering both the profile and the level when dealing with different sub-categories of the main aggregates?
 - Is it possible to quantify the impact of the revision due to the improvement in sources and methodologies and the revision due to the introduction of ESA95 definitions?
-

Title of Paper: Backward calculation of quarterly national accounts in Italy

Reference: STD/NA(99)38

Summary:

This paper summarises the main guidelines followed by ISTAT in the retrapolation of QNA data backwards to 1988, signifying an important historical revision of quarterly figures presented in the June 1999 Italian Quarterly National Accounts. Key factors involved in this revision were the adoption of ESA95 standards, the introduction of new classification systems (i.e. Nace Rev. 1 for economic activities, COICOP for Final consumption expenditure of households), the choice of new short-term indicators in estimating some quarterly items, and the use of a new seasonal adjustment procedure, Tramo-Seats. The paper presents the more important innovations introduced in the compilation of QNA in Italy during the last major revision and the general rules followed for backward calculation of quarterly figures and indicators, in addition to specific themes and aggregates, price system and supply side, demand, and finally employment and earnings.

Title of Paper: Backward calculation of Dutch national accounting data. Lessons from the Past: Towards a new approach.

Reference: STD/NA(99)39

Summary:

Recently, Statistics Netherlands decided to change the method for compiling time-series after revisions of national accounting data. Currently, the benchmark year/interpolation method is used for backward calculation of national accounting data. Previously, only variants of annual backward calculation methods were used to make these calculations. This paper provides an historical overview of methods used for compiling time series, including a discussion of past Dutch experiences using annual backward calculation and the process of implementation of a new methodology to time series data in the Dutch accounts.

Different methods of backward calculation may yield different results for the time series of national accounting data. Often a compromise has to be reached between detailed methods on the one hand and rather rough methods on the other hand. The former asks for much staff capacity and is very time-consuming. A rough method boils down to a ‘mechanical’ approach which yields results in a relatively short period. It goes without saying that also in the case of a quick method certain quality requirements have to be maintained.

Issues for Discussion:

- How can the best balance between timeliness, quality and detail be achieved? What are the experiences of other countries?
 - For the sake of international comparability of time series of national accounting data, should a standardisation of the methods for backward calculation of national accounts data at the international level be considered?
-

Title of Paper: Implementation of the 1993 SNA in Canada: Backcasting issues

Reference: STD/NA(99)40

Summary:

This paper discusses the implementation of the 1993 SNA in the Canadian national accounts series in November 1997 and the impact of these changes on classification of sectors and transactions, concepts and methodology. Within the context of the 1993 SNA implementation, the paper discusses reclassification of several important institutions - including universities and government business enterprises - into government and non-profit institutions serving households; of the capital account, including purchases of non-military equipment by the Defence Department and expenditures on mineral exploitation by mining units from intermediate expenses to capital formation; of household expenditures of goods and services; and of international trade services, more particularly the revaluation of exports and imports at the border of the exporting country; and of financial intermediation services indirectly measured (FISIM).

Issues for Discussion:

- a) Should the new and the revised series that are consistent with the 1993 SNA be backcast?
 - b) What methods should be used to backcast?
 - c) How far back should such series be backcast?
-

Title of Paper: Non-market output: Recent work by the Australian Bureau of Statistics

Reference: STD/NA(99)41

Summary:

This paper provides an update of the report presented at the September 1998 OECD meeting regarding a research program started in 1997 aimed at constructing better measures of output for non-market service industries. At present in the Australian system of national accounts (ASNA), the output of non-market services is generally measured by reference to the inputs used. For example, estimates of the output of government health services are derived by summing deflated estimates of the compensation of employees,

intermediate consumption and consumption of fixed capital. The ABS is now trying to develop output measures that are independent of input measures for the most significant non-market services. Each investigation has three phases. First, the best measure of output volume that the available data will support is constructed. Second, the output volume measure is brought into the current- and constant-price supply-use framework that the ABS now uses to compile its national income, expenditure and product accounts. Third, the new estimates are evaluated to ascertain whether they are trustworthy enough to be introduced into the ASNA. The paper outlines experimental output measures developed for health services, government education, police, corrections and justice and non-market services.

Issues for Discussion:

- What progress have countries made in developing output-based volume measures for non-market services?
- How much of this work has actually been reflected in changes to methods used to compile the national accounts?
- What techniques, if any, are being considered for measuring quality change? In what areas is it seen as particularly important to reflect quality change in the output measures?

Title of Paper: Non-market output at constant prices: Methodology and application in the Italian national accounts

Reference: STD/NA(99)42

Summary:

In this paper we present the methodology used in the Italian National Accounts to estimate the volume of non-market services produced by general government and NPISH in the framework of ESA95. The deflation of general government net product is part of the more general issue of value added deflation in the economy. The methodology adopted to estimate GDP at constant prices is based on branches of economic activity, 101 according to the Italian nomenclature.

The analysis by branch no longer considers separately the activity of general government and of NPISH which, in the past, were included in the branches of non-market services. The estimation of non-market output at constant prices was carried out in several steps that regarded the identification of the branches with significant non-market activity; the output typology of each branch to choose the most adequate estimation method; the selection of output indicators when an output method had been used; the analysis of labour input sources, if an input method had been used; the construction of the aggregates: output, intermediate consumption and collective consumption at constant prices; the calculation of price indices for output and intermediate consumption used to estimate GDP at constant prices; the value added at constant prices using double deflation for non-market sector.

Issues for Discussion:

- a) How to improve quality measurement
- b) How to extend the application of output methods

Title of Paper: Report of PUMA Expert Group meeting on measuring productivity in the government sector

Reference: STD/NA/RD(99)1

Summary:

This past two decades have seen increased public management change. Reformers for the most part say that public management reform has been achieved or is consistent with observations of increased efficiency. However, information in this area has been imprecise. Statistical and budgetary agencies from various countries have made efforts to measure general government productivity. These efforts are generally made in isolation, often employing different methods. Given the increased availability on inputs and the nature and volume of government outputs, the OECD's Public Management Service (PUMA) believes that there is both potential to improve information on general government productivity and interest on the part of governments in having a guidance on this issue. PUMA called this expert meeting for three key purposes: to identify an appropriate measure of productivity by discussing the relative progress, merit and application of different productivity measurement methods; to assess the policy relevance of productivity measures in the general government sector; and to identify an appropriate way forward for PUMA in assessing the productivity impact of public sector reforms in OECD Member Countries.

This paper presents the national accounts context and discusses national experiences (Australian, Dutch, Finnish, Swedish, UK) within the framework of productivity measurement in the general government sector. Three key areas provide the focus of the summary, namely the incorporation of changes in quality into productivity measurement, determining output indicators and measures, and policy relevance and the use of output and productivity measures.

Title of Paper: Measuring public sector productivity: Case studies presented at the PUMA Expert Group meeting on measuring productivity in the government sector

Reference: STD/NA/RD(99)2

Summary:

The past two decades have seen the introduction of significant public management reforms in OECD Member countries. A key objective of many of these reforms has been to increase public sector efficiency (productivity). Parliament, ministers, government officials and the statistics community have shown a strong interest in the improved measurement of public sector productivity, as a means to improve the accuracy of national accounts, to monitor the benefits of public management reforms, to evaluate the performance of individual agencies and to contribute to the budget formulation process. In response to this interest, the OECD held an "expert's meeting" earlier this year where public management and national statistical officials jointly met to discuss possible next steps in this area. This paper contains five case studies presented at this meeting: Australia, Finland, Netherlands, Sweden and United Kingdom.

Title of Paper: The need for employment measures consistent with the national accounts

Reference: STD/NA(99)43

Summary:

This paper broadly outlines the experiences of the Australian Bureau of Statistics (ABS) in ensuring consistency between the “core” national accounts and estimates of employment relating to national accounts. Although estimates of employment do not appear in the “core” national accounts, there is a need to have estimates of employment (and similar variables such as hours worked) that are consistent with the national accounts. This is because estimates of employment are often used to analyse particular aspects of the accounts. Examples of this include the derivation of average earnings estimates, estimates of labour and multi-factor productivity, and analysis of the input-output tables through the use of employment multipliers. Also estimates of employment may be used in the compilation of certain national accounts aggregates (for example, compensation of employees) and obviously this requires employment estimates on the same conceptual basis as the aggregate being compiled. More specifically, the paper outlines sources of ABS data on employment; the use of employment estimates in compiling national accounts estimates pertaining to compensation of employees and quarterly volume estimates of industry value added for certain industries; and the use of employment estimates for analysis of average earnings, labour and multi-factor productivity and input-output tables.

Issues for Discussion:

- The paper describes Australia's experience in reconciling employment estimates from various sources in order to derive the measures most appropriate for use in conjunction with the national accounts. What are other countries' experiences in this regard?
- The paper describes how employment estimates are used in the compilation of certain national accounts aggregates by the ABS. How do other countries use employment estimates in the compilation of their national accounts?
- The paper asserts that hours worked estimates are the most appropriate for productivity analysis. What are the views of other participants on this issue?
- Do other countries have experiences with the use of employment estimates to analyse national accounts outcomes that are different from Australia's?

Title of Paper: Linking social and economic statistics through the 1995 revision of national accounts and labour accounts

Reference: STD/NA(99)44

Summary:

National accounts have a long tradition of publishing labour data, from Labour accounts development in the late eighties to the focus on the consistency within labour statistics in the early nineties. From the ESA

1995 revision onwards, National accounts and Labour accounts present equal employment and compensation of employees figures. This not only improved the linkage of economic to social statistics for users, but it also has enlarged data quality check possibilities for both sides.

This paper describes the progress made in reconciling social statistics and economic statistics through the linkage of Labour accounts and National accounts in the Netherlands. The nature of labour data is described (household surveys, establishment surveys and registered data on wage sums from social security institutions), followed by a discussion of the integration of this data into Labour accounts and the final incorporation of labour data into national accounts. The paper also highlights some “fine-tuning” and infrastructural issues that were addressed in order to fully homogenise the data and concludes by providing research suggestions for improving the process of joint reconciliation that will thus act to enhance the timeliness and quality of statistics.

Issues for Discussion:

- Usually, there is a whole range of source data on employment and compensation of employees: Labour Force Survey, Establishment surveys on employment and earnings, Production statistics, data from registrations, etc. Do other countries have experiences in integrating and/or explaining the differences between the relevant source data?
 - In cases where the relevant source data have been compared and/or integrated, what have been the experiences in relation to the quality and the deficiencies of the respective source data?
-

Title of Paper: The calculation of productivity in the national accounts: The situation in Switzerland

Reference: STD/NA(99)45

Summary:

Productivity measurement is a controversial subject in Switzerland. In spite of major restructuring of the Swiss economy at the beginning of the 1990s, it can be observed that productivity is stagnating compared with an appreciable increase in that of our principal economic partners. Economists cannot explain why the double-digit rates of growth of investment in equipment goods are not accompanied in Switzerland by an improvement in the efficiency of the workforce. This paper presents a definitional, methodological and conceptual background to productivity calculation in Swiss national accounts, followed by a discussion on the choice of the measure of volume of work used in the calculation of productivity in Switzerland and the limits of the analysis of productivity as it relates to finance companies.

Issues for Discussion:

- Are activities generating speculative gains productive according to SNA93 and ESA95?
 - Should a specific current account be created for speculative gains and related activities?
-

Title of Paper: Allocating small enterprises to institutional sector

Reference: STD/NA(99)46

Summary:

One of the innovations of the 1993 SNA is the introduction of a production account for the household sector. While such an addition seemed unproblematic initially, it does involve some ambiguities in implementation which, while not exactly difficult, are not entirely straightforward to resolve. This paper elaborates the various practical, conceptual and analytical considerations involved in the construction of a production account for the household sector.

Issues for Discussion:

- Is it useful to keep separate estimates for very small enterprises (however derived) as a conspicuous measure of informal activity?
- Should the production account for the household sector be used as little as possible by ensuring as much production activity as possible is included in the corporate sectors or is it useful to think of this as the appropriate place to record informal activity?
- Is the practice of using a cut-off in terms of numbers of employees or turnover so widespread that it should become a de facto standard for dividing units falling into the corporate sectors from those falling to households?
- If the answer to this is no, is the deciding factor on allocation the legal status of the unit or the availability of a full set of accounts? Sometimes an enterprise below the cutoff will opt for double entry book-keeping because of VAT advantages. So some VSEs may get into the corporate sector if the full accounting rule is followed (0.7% of the 1.2 million VSEs in Poland in 1996). Equally some unincorporated enterprises might have large enough turnover that they get into the corporate sector also.
- Does “available” in this context mean available to the enterprise or available to the statistical office?

Title of Paper: The classification of quasi-corporations in Korea

Reference: STD/NA(99)47

Summary:

As the 1993 SNA recommends that the production account as well as other accounts be compiled by institutional sectors, institutional sectoring has become an integral issue. In practice, when we distinguish between the corporations and households sectors it is necessary to have more practical criteria to distinguish quasi-corporations from unincorporated enterprises because in SNA quasi-corporations are regarded as corporations for sectoring purpose. This paper reviews the practical criteria for identifying the quasi-corporations among household unincorporated enterprises in Korea. Income tax law in Korea prescribes the responsibility of double entry bookkeeping on the basis of sales volume. This criterion is consistent with that of 1993 SNA that describes as quasi-corporations the enterprises with a complete set of accounts, including balance sheet.

Title of Paper: Report on the activities of the working party on indicators for the information society

Reference: STD/NA(99)48

Summary:

The development of appropriate statistical indicators concerning the information economy and information society are essential for an adequate understanding of the mechanisms and trends occurring in this field and to permit an adequate base for policy development and monitoring. This premise led, in 1997, to the formation of an OECD ad-hoc statistical experts group (the ICCP Statistical Panel), the aim of which was to establish a set of definitions and methodologies to facilitate the compilation of internationally comparable data for measuring various aspects of the information society, the information economy and electronic commerce.

Late in 1998 this ad-hoc group was afforded the status of a Working Party and the first meeting of the Working Party on Indicators for the Information Society (WPIIS) was held in April 1999. The WPIIS is chaired by Dr Fred Gault, Statistics Canada, with Sweden and France providing the vice-chairs. This paper discusses the work program of the WPIIS.

Issues for Discussion:

- a) Are there any aspects of the development of ICT and related statistical indicators which would benefit from the input of national accounts statisticians and, if so, how they might make this contribution?
- b) Are there some aspects of the developments in electronic commerce, the information economy and the information society which impact on the national accounts framework and measurement and, if so, how these might be incorporated into that framework?

Title of Paper: Statistical Working Party of the OECD Industry Committee: Overview of Activities

Reference: STD/NA(99)49

Summary:

The Statistical Working Party of the OECD Industry Committee brings together representatives from national statistical offices and from industry and economics ministries to develop data bases and quantitative analyses in support of the work of the OECD Industry Committee. Under its present chairmanship of Mr. Edwin Dean - former Associate Commissioner of the United States Bureau of Labor Statistics - the activities of SWIC are organised around two broad areas: (i) Productivity measurement and analysis; (ii) data bases and indicator development. More specifically, this paper discusses three proposals put forward by the industry committee to develop manuals on productivity measurement, quality adjustment of price indices for information technology products, and productivity analysis. The development of 'ready-to-use' data sets for industrial analysis such as STAN (Structural Analysis database) is also outlined.

Issues for Discussion:

- a) What is countries' assessment of the concordance between input and output data in their national accounts? More specifically, for the purpose of productivity measurement, is data on output (or on value-added) for a particular industry readily comparable to data on inputs (such as labour input)?
 - b) Are there efforts in NSOs to integrate input-output tables and national accounts more closely?
 - c) Following the introduction of a new activity classification (ISIC Rev.3) in the context of the SNA93, to what extent will countries engage in efforts to back-cast national accounts data by industrial activity in the new classification, and if so at what level of detail?
-

Title of Paper: Coherence adjustments in the national accounts

Reference: STD/NA(99)50

Summary:

The national accounts framework aims to present a fully consistent picture of the UK economy. In practice the data sources used in the accounts are subject to statistical error, and complete coherence between measures of economic activity is not achieved without making specific adjustments. These adjustments have been made at current prices using supply-use tables through the input-output framework. This paper provides a background and describes the types of adjustments made to national accounts data as presented in the 1999 Blue Book, including conceptual, quality and coherence adjustments. Reasons for adjustments in such areas as gross trading profits, compensation of employees and trade in goods and services are also discussed. The note does not cover the adjustments made to achieve coherence for the most recent periods, which are outside the input-output framework.

Issues for Discussion:

- Have other countries published their coherence adjustments; if so what was the public reaction?
 - Is the distinction between quality and coherence adjustments recognisable to other countries?
 - How does the size of the UK adjustments compare with those from other countries?
-

Title of Paper: Value added by industry: A problem of international comparison

Reference: STD/NA(99)51

Summary:

This paper deals with a problem in internationally comparable economic statistics, namely, the fact that countries measure value added by industry differently. The economic measure, value added, is important both in its own right and because it is a component of other economic measures such as productivity.

Value added by industry measures the additional value created by a production process. This additional value, created by factors of production such as labour and capital, may be calculated either before or after deducting the consumption of fixed capital used in production. Thus, gross value added by industry is the value of its output of goods and services less the value of its intermediate consumption of goods and services and net value added as the value of output less the values of both intermediate consumption and consumption of fixed capital.

Issues for Discussion:

- a) Should member countries be encouraged, persuaded or required to provide data using internationally recommended guidelines and conventions?
 - b) If it is not possible, should macro adjustments be made to “correct” their series before they are released in the international publications?
 - c) In the absence of the above, should OECD and other international organisations add bold-faced caveats on non-comparable data published in their name?
-

Title of Paper: The new assessment of goods and services in French national accounts

Reference: STD/NA(99)52

Summary:

Like those of the other European Union countries, the French national accounts are introducing this year the new European system for national accounting, ESA95. Without revolutionising past results, this new “base 95” brings some substantial improvements. Conceptual changes, the use of new or re-exploited statistical sources, and the incorporation of France’s overseas departments (DOMs) into the economic territory alter the levels of the main aggregates. Gross domestic product (GDP) is raised by approximately 2% in relation to the former base 80, and investment by 6%, due mainly to the inclusion of investment in computer software.

Even so, for the period 1991-96, the new changes that emerge confirm the major trends of the old data. The new figures do lessen the amplitude of movements, however, for both the 1993 recession and the recovery of 1994-95.

A great many other changes to the figures, some of which cancel each other out, affect the other variables of the national accounts: the structure of value added and consumption by households and by government. This paper will also present the new nomenclature of activities and products, which is better suited to the importance taken on by services in GDP, the new accounts at constant prices, and the improvements that have been made to quarterly accounts.

Issues for Discussion:

- What problems have already been encountered by changing the base year?
 - Aside from the ESA95, what other improvements have been brought about by the new base year?
-

Title of Paper: Revision Dutch national accounts: First results and backgrounds

Reference: STD/NA(99) 54

Summary:

As in many other countries, the national accounts of The Netherlands have been revised in accordance with the new world-wide System of National Accounts (SNA) 1993 and its European equivalent, the European System of National and Regional Accounts (ESA) 1995. As a consequence, the new national accounts data give a more accurate picture of a number of recent developments, such as the expanding importance of services, automation, information and knowledge. In addition, new statistical insights and results have been incorporated. The revision has implications for the macro-economic description and for a number of policy indicators. For the year 1995, Gross Domestic Product (GDP) has been adjusted upwards by 26.4 billion guilders, an increase of 4.1%. The upward adjustment is largely caused by the implementation of the new international guidelines. The net national income (NNI) has increased less (1.1%), since a large part of the changes concerns an upward adjustment of consumption of fixed capital. The revision also affects a number of policy indicators. Net borrowing of government has changed a few tenths of a percentage point (in some years upward, in other years downward). Government debt as a percentage of GDP has decreased by almost two percentage points, mainly caused by the change in GDP.

This paper commences with a short introduction to the main reasons for the revision of the Dutch national accounts. Subsequently, attention is paid to the results on a macro-level. These parts mainly focus on the revision of data in relation to the production process. Finally, some issues in relation to the implementation of the revision are discussed.

Issues for Discussion:

- How do other countries organise their revision process? What factors do other countries consider to be important in improving the organisation, communication and transparency of a revision process?
- Did other countries also experience practical problems in the implementation of the international guidelines (e.g., intangible assets)?
- How can we improve international comparability of national accounts data, not only within the European Union but also between EU Member States and other OECD countries?

Title of Paper: The hidden economy in Poland in 1994-1997

Reference: STD/NA(99) 55

Summary:

There are several difficulties involved in the implementation of the SNA/ESA recommendations into Polish statistical practice, including new definition of capital formation, accrual approach to budgetary data, treatment of pension funds, FISIM, employment estimates, non-market output at constant prices etc., and the general necessity of undertaking several rough and risky estimates. This paper focuses on one such difficulty concerning the estimates of activities in the “hidden economy” or those activities involving illegal or concealed production. Aspects of research completed by the Central Statistical Office with

reference to the hidden economy are discussed, including three methods used to estimate the size of the hidden economy: direct method (surveys of small and large registered economic entities), surveys of non-registered work through labour market survey (labour force survey and non-registered work module survey) and consumers survey. The paper concludes that the scope of GDP estimates compiled by CSO were changed to accommodate activities in the hidden economy, resulting in an increase in the existing range of estimates of real and nominal GDP levels.

Issues for Discussion:

- The scope of the adjustment of the hidden economy
 - The reliability of "new" GDP figures from users side.
-