



**Economic and Social  
Council**

Distr.  
GENERAL

ECE/CES/2008/16  
26 May 2008

ENGLISH ONLY

---

**ECONOMIC COMMISSION FOR EUROPE**

**STATISTICAL COMMISSION**

CONFERENCE OF EUROPEAN STATISTICIANS

Fifty-sixth plenary session  
Paris, 10-12 June 2008  
Item 7 of the provisional agenda

**SEMINAR ON STRATEGIC ISSUES LINKED TO THE MEASUREMENT OF  
INTERNATIONAL TRANSACTIONS**

**SESSION III: INSTITUTIONAL ARRANGEMENTS FOR COMPILATION OF  
INTERNATIONAL ACCOUNTS STATISTICS**

**CONCEPTUAL LINKAGES AMONG SYSTEMS OF MACROECONOMIC ACCOUNTS  
STATISTICS AND IMPLICATIONS FOR INSTITUTIONAL ARRANGEMENTS**

Note by the Swiss Federal Statistical Office<sup>1</sup>

**I. INTRODUCTION**

1. Macroeconomic accounts statistics have undergone a process of harmonisation over the last fifteen years or so. As a result, the data of one set of accounts can to a large extent be combined with the data of another set for compilation or analysis purposes, or to check key accounting identities grounded in macroeconomic theory. Thanks to harmonisation, and subject to data availability and compliance with the existing standards, it is for example possible to show how the saving and investment behaviour of an economy, as captured in the national accounts, is mirrored in the balance of its current transactions with the rest of world as captured in the

---

<sup>1</sup> This paper has been prepared at the invitation of the secretariat.

balance of payments. Can macroeconomic accounts statistics be considered as integrated economic statistics? And what are the implications of integrated economic statistics for institutional arrangements? These are the two questions this paper briefly examines.

2. This paper draws on existing material mainly from the International Monetary Fund and the United Nations, complemented with views of the Swiss Federal Statistical Office (SFSO) when this was deemed appropriate. In some instances the text is the same as in this material, or is similar. Section II lists and briefly describes the existing main systems of macroeconomic accounts statistics. Section III highlights key conceptual linkages among the main systems of macroeconomic accounts statistics, which are the result of the harmonisation process referred to above. Section IV describes the integrated approach to economic statistics, its objectives, its benefits, and the key building blocks of its operationalisation. Section V deals with the specific issue of the implications for institutional arrangements of the integrated approach to economic statistics. Section VI offers concluding remarks.

## II. MAIN SYSTEMS OF MACROECONOMIC ACCOUNTS STATISTICS<sup>2</sup>

3. A system of economic accounts consists of a coherent, consistent and interrelated set of economic accounts for the economy as a whole or for particular sectors of the economy. It provides a set of concepts, definitions and classifications within a broad accounting framework. Its purpose is to support economic analysis and policy-making/-monitoring.

4. The main systems of macroeconomic accounts statistics are:

- (a) national accounts that record economic flows and interactions between economic agents mainly related to production and to the distribution, redistribution, and use of income, as well as levels and composition of assets / liabilities, and links between an economy and the rest of the world, and whose statistical standard is the *System of National Accounts 1993* (SNA 93);
- (b) balance of payments statistics that record economic transactions of an economy with the rest of the world as well as the level and composition of external financial assets / liabilities, and whose statistical standard is the *Balance of Payments Manual*, fifth edition (BPM 5);
- (c) monetary and financial statistics that record stock and flow data on the financial – and to some extent non-financial - assets / liabilities in an economy with a particular focus on the financial corporations sector, and whose statistical standard is the *Monetary and Financial Statistics Manual 2000* (MFSM 2000);
- (d) government finance statistics that record revenue / expense transactions and other economic flows, as well as stocks of assets / liabilities of the general government

---

<sup>2</sup> This section draws on Chapter I. (Introduction) of: International Monetary Fund, *The System of Macroeconomic Accounts Statistics – An Overview*, Pamphlet Series no. 56, Washington D.C., 2007; as well as on the introductory chapters of: SNA 93, BPM 5, MFSM 2000, GFSM 2001, SEAF 96, SEEA 2003.

sector or the public sector, and whose statistical standard is the *Government Finance Statistics Manual 2001* (GFSM 2001);

- (e) food and agriculture statistics that record data on production, income and capital formation of agricultural households / corporations as well as goods and services data for agricultural products, and whose statistical standard is the *System of Economic Accounts for Food and Agriculture 1996* (SEFA 96);
- (f) labour accounts that bring together labour market data describing supply and demand on the labour market as well as labour payments, and for which there is no known statistical standard;
- (g) environmental economic accounts that record data relating to flows of materials and energy, to environment-related transactions, to environmental assets, to the impact of the economy on the environment, and whose quasi-statistical standard is the *Handbook of National Accounting: Integrated Environmental and Economic Accounting, Rev. 1* (SEEA 2003).

5. National accounts are the system of macroeconomic accounts statistics with the broadest scope. The corresponding statistical standard – the SNA 93 - is the overarching conceptual framework for all macroeconomic statistical standards<sup>3</sup>. The other systems of macroeconomic accounts statistics are more specialised and focus on specific policy and analysis needs. The corresponding statistical standards (BPM 5, MFSM 2000, GFSM 2001, SEFA 96, SEEA 2003) are to a large – but variable - extent harmonised with the SNA 93 as regards concepts, definitions, classifications, and accounting structures. Harmonisation with the SNA 93 is the most noticeable in the BPM 5 whereas it is less pronounced in the GFSM 2001, the labour accounts, and the SEEA 2003. Together the main systems of macroeconomic accounts statistics form a harmonised macro system of statistics that allow data to be compared and combined across the various accounts.

### **III. KEY CONCEPTUAL LINKAGES AMONG THE MAIN SYSTEMS OF MACROECONOMIC ACCOUNTS STATISTICS<sup>4</sup>**

6. An important feature of the main systems of macroeconomic accounts statistics is the use of the same basic concepts as regards (i) statistical units and their grouping, (ii) definition of the domestic economy, (iii) stocks, flows and their integration, (iv) boundary conditions concerning production and assets / liabilities, and (v) valuation and accounting rules. The systems of macroeconomic accounts statistics also use similar accounting frameworks. There are however substantial differences between the systems, mainly concerning some classifications, some boundary conditions (government finance statistics, environmental economic accounts) and some valuation rules (environmental economic accounts). These differences that exist because it

---

<sup>3</sup> In the case of the labour accounts, both the SNA 93 and the statistical standards/guidelines defined by the International Labour Organization form the overarching conceptual framework.

<sup>4</sup> This section draws on Chapters I. (Introduction) and VI. (Linkages Among Macroeconomic Statistical Systems) of: International Monetary Fund, *ibid.*

is necessary to take into account specific policy and analysis needs, are well identified and can generally be reconciled if need be.

7. Harmonisation of basic concepts and of accounting frameworks has major benefits:

- (a) it enhances data compilation, insofar as a single data collection effort can serve multiple uses;
- (b) it fosters numerical consistency and facilitates data reconciliation, for example integrating sectoral flows and stocks into macroeconomic analysis;
- (c) it makes it easier to assess the reasonableness of data.

#### **IV. INTEGRATED APPROACH TO ECONOMIC STATISTICS<sup>5</sup>**

8. Integrated economic statistics are statistics that are consistent, coherent, with breadth as well as depth. The first element, consistency, refers to the need to use common concepts, definitions and classifications, and to defining statistical units uniformly over long periods of time. Consistency within national statistical systems is not enough. It must take into account international standards in order to allow comparability. The second element, coherence, refers to internal linkages and the inter-relatedness of data. It deals, for example, with the ability to establish robust links between enterprise statistics and its constituents (establishments) as well as between economic variables such as exports and production. The third element deals with the breadth of economic statistics, which must tend towards full coverage of the economy. They must be comprehensive and non-duplicative of economic activities. The fourth and last element has to do with the depth of economic statistics, that is issues such as commodity and industry levels of detail.

9. The integrated approach to economic statistics entails several benefits for respondents and other data providers, for statistical agencies and for data users, summarised below:

- (a) integrated economic statistics meet the demands of users better and therefore increase the value of statistical information;
- (b) they may reduce the burden on respondents and other data providers, provided the level of detail is kept constant and data collection is geared to the information available from respondents and other data providers, for example in respect of forms, terminology, etc.<sup>6</sup>;

---

<sup>5</sup> This section draws on Sections II. (Need for integrated economic statistics), III. (Integration of economic statistics) and IV. (Production of integrated economic statistics) of: Statistical Commission, *Report of the Friends of the Chair on Integrated Economic Statistics*, thirty-ninth session, New York, 26-29 February 2008.

<sup>6</sup> The latter condition obviously results in shifting the burden away from the respondents/data providers onto the data compilers.

- (c) they facilitate aggregation and comparison among disparate data sets, facilitating for example the compilation of consistent and coherent macroeconomic statistics such as national accounts and balance of payments statistics;
- (d) they facilitate analyses based on micro data coming from different but consistent and coherent sources, and make it possible to relate the micro databases to the systems of macroeconomic accounts statistics, a must to address key policy issues such as the impact of economic globalisation;
- (e) they make it easier for statistical agencies to monitor and improve data quality and facilitate conducting data revisions;
- (f) they make it easier for statistical agencies to streamline statistical production processes, thereby making them more efficient.

10. Operationalising the integrated approach to economic statistics means dealing with issues concerning statistical standards, statistical production processes, and institutional arrangements.

#### **A. Statistical standards**

11. The integration of economic statistics requires the use of common statistical standards concerning concepts, definitions, and classifications. A common standard exists for economic statistics and is formed by the SNA 93. As mentioned above, the other *macroeconomic* statistical standards are to a large extent harmonised with the SNA 93. As to the *microeconomic* statistical standards, their harmonisation with the SNA 93 is progressing well as was witnessed at the last session of the Statistical Commission<sup>7</sup>.

#### **B. Statistical production**

12. The traditional approach to the collection of economic statistics has been to design surveys and statistics for different industries or activities independently of each other. The integration of economic statistics makes it necessary to change the objectives of statistical design and development. The objective of accurately measuring the industry or sector remains, but an equally important objective is designing statistics that are consistent and coherent with those for other industries and sectors. The key elements in respect of the integrated approach to statistical production are:

- (a) a comprehensive business register – or well-harmonised business registers ideally complemented with a unique business identifier - to ensure consistency of unit models and of classifications across all statistical measures, to select samples, and to combine administrative/profiling/survey data;

---

<sup>7</sup> See in this respect the work of the Statistical Commission at its thirty-ninth session, New York, 26-29 February 2008, concerning the adoption of revised international recommendations on industrial statistics, distributive trade statistics, and tourism statistics.

- (a) a chart of accounts to link business accounting with the various accounting frameworks supported by statistical agencies;
- (b) a limited number of well-harmonised annual and sub-annual economic surveys, that may collect a core set of variables for all units;
- (c) common generic processing systems and methods to improve data quality and timeliness, while reducing costs;
- (d) a common data and metadata repository to enhance analytical activities;
- (e) rigorous and transparent revision processes to deal with conflicting demands about timeliness, accuracy and detail.

### C. Institutional arrangements

13. Integrated economic statistics also depend upon institutional arrangements. The so-called “centralisation” or “decentralisation” of statistical systems is not what is referred to here. Even in a highly centralised system with only one agency compiling all data, the various domains of economic statistics (macro, micro, structural, short-term, monetary, non-monetary statistics) will almost certainly be dealt with by different units and people, using different methodologies, operating different data collection and processing schemes, and interacting with different respondents and other data providers as well as users. Thus in every statistical system, irrespective of how it is organised, the integrated approach to economic statistics requires specific institutional arrangements to manage this situation. The next section elaborates on this issue and highlights some aspects of institutional arrangements that may further the integration of economic statistics.

## V. IMPLICATIONS FOR INSTITUTIONAL ARRANGEMENTS<sup>8</sup>

14. Institutional arrangements are important in the context of integrated economic statistics because in every actually existing statistical system, statistics are produced outside the national statistical agency by other government departments and quasi-government organisations. Also other organisations provide some of the input data that are used by national statistical agencies. As the use of administrative data increases, national statistical agencies become more dependent on data from sources outside their direct control.

15. The above applies to international accounts statistics as well and requires appropriate institutional arrangements because decisions to modify any aspect of the content or processing in one part of the accounts or underlying primary data have repercussions on the rest of the accounts. Cooperation and coordination between the national statistical agency and the central bank is often of critical importance for international accounts statistics. In Switzerland, the SFSO

---

<sup>8</sup> This section draws on Section V. (Institutional arrangements for managing integrated economic statistics) of: Statistical Commission, *ibid.*

and the Swiss National Bank have therefore formalised their cooperation in the field of economic statistics through a written agreement.

#### **A. Lead agency**

16. The integration of economic statistics is more effective if one agency has responsibility for leadership of the whole of economic statistics. Alternatively several agencies may have responsibility for leadership of well-defined domains of economic statistics and may arrange for cooperating effectively with the other agencies. Ideally, the leadership role should be established in law or some other binding instrument but, regardless of the legal framework, the lead statistical agency has to demonstrate statistical leadership to ensure that its role is acknowledged in day-to-day business by other statistics producers, by respondents and other data providers, as well as by users.

#### **B. Cooperation agreements**

17. The integrated approach to economic statistics requires enhanced coordination and cooperation among various units and organisations. Depending on the context it may be difficult or impossible to implement all the features of integrated statistical production processes such as a common comprehensive business register or well-harmonised business registers, well-harmonised annual and sub-annual economic surveys, common processing systems and methods, common data and metadata repository, as well as common revision processes.

18. Formalising the cooperation among the various units and organisations involved in statistical production is useful because it consolidates cooperation and makes it more predictable. Where agencies confront multiple information taken from various business registers, surveys, or administrative data collection processes conducted by different administrative and statistical agencies, the greatest risks are that data might not be delivered on time, data quality might not be satisfactory or might be changed unexpectedly, or data production might be stopped for any reasons.

19. Cooperation agreements - such as memorandums of understanding and service level agreements - can deal with these risks as well as with strategic issues and fundamental principles of cooperation, for example:

- (a) mission and objectives;
- (b) harmonisation of concepts, definitions and classifications;
- (c) conditions and timetable for the supply of data;
- (d) level of detail of data;
- (e) confidentiality and security of data;
- (f) uses of data;
- (g) coordinated review and design of data collection;
- (h) consultation before changes are made (for example as regards standards, collection, processing, variables, forms, uses of data, etc.);
- (i) resolution of disputes.

### **C. Advisory committees and relationship meetings**

20. A strong system of advisory committees involving respondents, other data providers and users is important for the integration of economic statistics. They can support consistence and coherence in economic statistics by promoting the use of national and international statistical concepts, classifications and frameworks. They can encourage the development, promotion and implementation of standard questionnaires and terminology. Advisory committees can also support sound decisions by ensuring that all stakeholders are taken into account in the development of statistics.

21. Regular relationship meetings with the various units and organisations involved in statistical production are also useful. They should work at two levels to support the integration of economic statistics. At the expert level, working groups and practical relationship meetings develop statistical work and resolve practical problems. This must be supported by management-level relationship meetings that build a widespread commitment to integrating the statistical system and deal with strategic issues.

### **D. International cooperation**

22. The very fact that there are nowadays well-harmonised systems of macroeconomic accounts statistics, with all their benefits for compilation, comparisons and analysis, is an achievement of international cooperation and highlights its importance for the integration of economic statistics. From our experience we know that enhanced cooperation and coordination among international organisations often has a positive impact on cooperation and coordination at national level among the various units and organisations involved in statistical production. In the case of Switzerland this is best exemplified by the enhanced cooperation between the SFSO and the Ministry of Finance that resulted from the harmonisation of statistical standards in the fields of national accounts and government finance statistics.

23. Also we feel that the “lead agency principle” that was mentioned earlier in this section should apply to international cooperation matters. It may be an advantage for international organisations to have only one *official* partner for any given major statistical issue, for example the development or revision of statistical standards for any specific macroeconomic accounts statistics. An *informal* dialogue between international organisations and other partners at national level would of course always be possible and even desirable. From the point of view of individual member countries, this approach may be conducive to better structured and coordinated statistical systems because it would encourage operational interactions between units and organisations involved in statistical production.

### **E. Analytical capabilities**

24. Analysis is important for the integration of economic statistics because it can shed light on incompleteness, inconsistencies, incoherence and other shortcomings of economic data, as well as on the causes of those problems. Analysis is therefore a powerful diagnostic tool to assess the actual level of integration of economic statistics and to start devising a strategy for their further integration. Furthermore, it is increasingly admitted that providing accurate and detailed estimates of economic flows and stocks - a core activity of statistical agencies - is useful

but does not meet all the needs of users. The key issue about policy needs for an evidence base concerning major economic trends - for example economic globalisation - is about effects, that is causal links. Causal analysis, stopping short of making inferences requiring value judgments, is therefore a must for statistical agencies.

25. Developing analytical capabilities may have an impact on the work and organisation of both international organisations and national statistical agencies. International organisations may consider developing their work on standards, recommendations, guidelines, best practices in the field of statistical analysis to guide the work of countries and to foster the comparability and integrity of results. In other words, they may consider doing in the field of statistical analysis what they do – with much success as was mentioned above - in the field of data compilation. National statistical agencies may consider developing the required integrated statistical environment encompassing the various aspects referred to above (statistical standards, statistical production and institutional arrangements). They may in particular consider putting in place units dedicated to analysis as well as to research projects on emerging, cross-cutting, and complex statistical issues, such as economic globalisation. Such units are different in terms of mission, staff and qualifications from the “mainstream” data compilation units, while closely working with them. The SFSO put this type of units in place in 2004 with good results, for example in the field of productivity analysis.

## VI. CONCLUSION

26. Although the main systems of macroeconomic accounts statistics form together a well-harmonised macro system of statistics with the SNA 93 as the overarching conceptual framework, they do not necessarily form a system of integrated economic statistics. This is because the integration of economic statistics goes beyond the mere harmonisation of concepts, definitions, classifications and accounting structures at the macro level to encompass statistical production issues and institutional issues, and to cover both the micro and the macro levels. Dealing with these various issues and covering both the micro and the macro levels in line with the integrated approach to economic statistics is a matter of statistical policy, whose orientation eventually lies in the hands of every country’s statistical authorities.

27. The integrated approach to economic statistics has various implications for institutional arrangements and the author does not claim to have been exhaustive in this regard. In essence the institutional implications referred to above are about better structuring and coordinating statistical systems irrespective of their so-called centralisation / decentralisation. This should take into account the needs and capabilities of the various stakeholders (respondents and other data providers, units and organisations involved in statistical production, users) in a flexible way while making the whole system more predictable, transparent, and geared to a clear statistical policy objective, namely economic statistics that are consistent, coherent, with breadth as well as depth.

## VII. REFERENCES

Brigitte Buhmann, Wim Leunis, Alain Vuille and Kirsten Wismer, *Labour Accounts: A Step Forward to a Coherent and Timely Description of the Labour Market*, Bulletin of Labour Statistics, International Labour Organization, 2002.

Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank, *System of National Accounts 1993*, Brussels/Luxembourg, New York, Paris, Washington D.C., 1993.

Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank, *Handbook of National Accounting: Integrated Environmental and Economic Accounting, Rev. 1*, Brussels/Luxembourg, New York, Paris, Washington D.C., 2003 (final draft).

European Central Bank, *Meeting the Challenges of Globalisation Requires an Enhanced Cooperation between the ESS and the ESCB*, 93<sup>rd</sup> DGINS Conference, Budapest, 20-21 September 2007.

Food and Agriculture Organization, *A System of Economic Accounts for Food and Agriculture*, Rome, 1996.

International Monetary Fund, *Balance of Payments Manual*, 5th ed., Washington D.C., 1993.

International Monetary Fund, *Monetary and Financial Statistics Manual 2000*, Washington D.C., 2000.

International Monetary Fund, *Government Finance Statistics Manual 2001*, Washington D.C., 2001.

International Monetary Fund, *The System of Macroeconomic Accounts Statistics – An Overview*, Pamphlet Series no. 56, Washington D.C., 2007.

Organisation for Economic Co-operation and Development, *Is Globalisation a Threat for Official Statistics?*, 93<sup>rd</sup> DGINS Conference, Budapest, 20-21 September 2007.

Statistical Commission, *Report of the Friends of the Chair on Integrated Economic Statistics*, thirty-ninth session, New York, 26-29 February 2008.

United Kingdom Office for National Statistics, *Globalisation – Statistical Challenges and Policy Evidence Needs*, 93<sup>rd</sup> DGINS Conference, Budapest, 20-21 September 2007.

\* \* \* \* \*