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OECD Statistics Working Papers
2005/2

The Statistical Measurement of Services

RECENT ACHIEVEMENTS AND REMAINING CHALLENGES

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OECD

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

03-Aug-2005

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English - Or. English

STATISTICS DIRECTORATE

> **Cancels & replaces the same document of 26 July 2005**

**THE STATISTICAL MEASUREMENT OF SERVICES:
RECENT ACHIEVEMENTS AND REMAINING CHALLENGES**

OECD Statistics Working Paper

by Enrico Giovannini and William Cave

JT00188079

ABSTRACT

Services are increasingly important in modern economies contributing about 68% of world economy value added in 2002 and, although at a much lower level, are increasingly traded internationally (see Table 1). These patterns of increasing importance of services are observed in the generality of both "developed" and "developing" economies, although there are economies which show exceptions to the trend.

This paper discusses the policy needs to understand the impact of services on the performance of modern economies, some of the most pressing measurement problems, and it summarises recent actions undertaken by international organisations and expert groups to address these issues.

It concludes that:- development work on services prices and volumes is fundamental to measurement of growth and needs to continue; there is a need to engage more countries in the development of their service statistics; international organisations should enhance co-ordination of interagency technical assistance and co-operation in this area; and from the national perspective, a wider implementation of a range of international standards is encouraged.

Les services prennent une importance croissante dans les économies modernes puisqu'ils ont contribué pour environ 68% à la valeur ajoutée de l'économie mondiale en 2002 et qu'ils sont de plus en plus échangés, quoique dans une mesure sensiblement moindre (cf. Tableau 1). Ces exemples de l'importance croissante des services sont communément observés dans les économies à la fois «développées» et «en développement», bien que certaines d'entre elles aillent à l'encontre de cette tendance. .

Ce document traite des besoins politiques pour comprendre l'impact des services sur la performance des économies modernes, de certains des problèmes de mesure les plus impérieux, et il résume les récentes actions entreprises par les organisations internationales et les groupes d'experts pour aborder ces problèmes.

Dans sa conclusion, est fait état de ce qui suit: un travail de développement sur les prix et volumes de services est fondamental pour la mesure de la croissance et doit nécessairement se poursuivre; il est indispensable d'engager plus de pays au développement de leurs statistiques des services; les organisations internationales doivent améliorer la coordination interagence de l'assistance et de la coopération techniques dans ce domaine; enfin, d'un point de vue national, l'application plus étendue d'une variété de normes internationales est encouragée.

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THE STATISTICAL MEASUREMENT OF SERVICES: RECENT ACHIEVEMENTS AND REMAINING CHALLENGES

by Enrico Giovannini and William Cave

1. Introduction

1. Services are increasingly important in modern economies contributing about 68%[1] of world economy value added in 2002 and, although at a much lower level, are increasingly traded internationally (see Table 1). These patterns of increasing importance of services are observed in the generality of both "developed" and "developing" economies, although there are economies which show exceptions to the trend. Many services can only be delivered when there is proximity between supplier and customer, which encourages firms to set up a commercial presence in foreign markets. The resulting trade known as foreign affiliates trade in services (FATS) has been growing faster than balance of payments trade in services, and, in terms of sales reported by the US, exceeds the latter.

Table 1- Services value added, trade and employment

Services value added as a % of total economy	1980	1998	2003
World	55.3	65.8	68.0
Exports of services as % of GDP	1980	1998	2003
World	3.7	4.8	5.1
Source: World Bank WDI			
Balance of payments trade in services v Foreign affiliates trade in services ($billion)			
	1997	2002	Mean annual % change 1997-2002
US Service exports	239	281	3.4
Service imports	152	211	6.8
Outward FATS sales	255	401	9.5
Inward FATS sales	223	387	11.6
Source: US BEA Survey of Current Business, October 2004			
Services employment as % of total civilian employment *(excludes armed forces)*			
	1980	1998	2003
OECD 30	N/A	64.9	68.6
of which G7	*59.0*	*69.0*	*72.8*
Source OECD: Annual Labour Force Statistics 2004			

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1   World Bank World Development Indicators 2004 – GDP is aggregated in current US$, calculated at current exchange rates.

2. Despite considerable progress over recent years, measuring the output of services still raises a range of complex conceptual and practical problems. It was with this in mind that, in March 2003, the United Nations Statistical Commission (UNSC) invited OECD to assist by co-ordinating development work on services statistics that is currently being undertaken by international organisations and international expert groups. The report presented at the 2005 UNSC addressed user needs, summarised activity and progress in current projects and set out some ideas and proposals for a future strategy for services statistics.

3. This paper, building on that report, presents the main activities undertaken by international organisations (IOs) and national statistical offices (NSOs) to improve the measurement of services. In some cases, these activities have already produced concrete outputs in terms of international standards (methodological manuals, classifications, etc.); while in other instances working groups are still working to compile new guidelines. On the other hand, over the last ten years several OECD countries have substantially improved the quality of their statistics on the services sector, while others are lagging behind, both because of technical difficulties and budget limitations.

4. This paper is organised as follows: in the second section policy needs for services statistics are discussed, while in the following one the most relevant measurement issues are discussed. The fourth section presents recent actions undertaken by international organisations to address these issues. In the final section some conclusions are drawn and recommendations for further actions are presented.

2. Policy needs and services statistics

5. Any attempt to take a strategic view on services statistics requires some assessment of data users and their analytical needs. Users may include central banks, national accountants, trade analysts/negotiators, ministries of finance and industry, international institutions, economic forecasters, businesses, trade associations and academia. One would also take into account user needs with sectoral interests such as health, education, tourism, financial services, audiovisual services etc., but only insofar as there is a need to make comparisons across sectors. In Table 2 there is a first attempt to show which statistical fields are most relevant for each category of policy needs.

6. There is a general and basic analytical need to understand the size and structure of the service sector's output and employment. Central bankers are clearly interested in a variety of price indicators as well as a wider set of short-term indicators related to output and demand, e.g. orders, retail sales, exports, employment and labour costs etc. In their role of maintaining currency stability they also need trade and balance of payments information. Generally, the interest is at a relatively macro-economic level. Ministries of Finance are equally concerned with all these to inform macro-economic and fiscal policy; and econometric models but may also be interested in indicators of longer-term competitiveness e.g. productivity, the drivers of growth or investment and indicators of attractiveness to foreign investors.

7. National accountants may be considered as key and influential users of service statistics as well as producers thereof. In measuring output a balance of good structural information for benchmarking, complemented with short-term indicators for projections are needed. Structural information should properly reflect the importance of the service sector with good output data for service enterprises and the non-market and non-profit activities where these are significant. They also need information on inputs, investment, purchases, employment, trade and prices.

8. Trade ministries, analysts and negotiators need detailed trade data for goods and services to inform trade negotiations and monitor agreements. For services trade, in addressing the needs of the General Agreement on Trade in Services (GATS), as well as regional accords such as the European Single Market and the North American Free Trade Area, this includes but goes beyond the traditional economic concept

of exports and imports in the balance of payments, to cover access to markets through commercial presence and presence of natural persons. Since many services can only be delivered locally to customers, e.g. hotels and cleaning services, statistics on activity of foreign affiliates are needed, as well as on foreign direct investment and on movement of temporary workers delivering services. The services trade agenda and the internationalisation of the production process increases the need for internationally comparable domestic production data for services.

Table 2 - Policy needs and statistical tools involving services

Monetary policy and macroeconomic analysis	Competitiveness, communication, industrial, SMEs policies	Productivity analysis	Trade agreements, globalisation of services, offshoring/ delocalisation	Labour policies
National Accounts	National Accounts	National Accounts		
Business registers, classifications, monthly, quarterly and annual business surveys	Business registers, classifications, annual business surveys	Business registers, classifications, annual business surveys. Capital and employment surveys	Business registers Bank settlement systems; business surveys and household surveys	Business registers. Business surveys
Service prices and volumes		Service prices and volumes		
Short-term indicators of services output				
Balance of payments	Trade in services. Foreign Affiliates Trade in Services (FATS) statistics. Foreign Direct Investment (FDI)		Trade in services. Foreign Affiliates Trade in Services (FATS) statistics. Foreign Direct Investment (FDI). Movement of people (and remittances)	
Other types of statistics	Information and Communication Technologies (ICT) statistics. Innovation statistics. Research and Development (R&D) statistics. Labour Force Survey Mergers & Acquisitions	Information and Communication Technologies (ICT) statistics. Labour Force Survey	Information and Communication Technologies (ICT) statistics. Labour Force Survey. Migration statistics	Household surveys of employment (e.g. Labour Force Survey)

9.   Ministries of Industry, Enterprise or the Business Environment, and trade associations generally take a much more detailed interest in the workings of the economy. They need more micro-economic data on industry and services to inform economic analyses to help understand the dynamics and obstacles to growth as well as international competitiveness and attractiveness of the economy to foreign direct investment. They may take an interest in performance of small and medium-sized enterprises, seen as a potential engine of growth, in productivity data, labour costs, measures of human capital, skills, innovation, research and development, science, technology, information society and information and

communication technology statistics, plus other dynamic growth areas such as biotechnology, business services, etc. Finally, there is a general cross-cutting concern about sustainable development.

10. Two recent political initiatives illustrate this demand for statistics on services activities and their competitiveness, as well as their contribution to the competitiveness of national economies as a whole. Firstly in December 2003 the European Commission published a Communication[2] "The competitiveness of business-related services[3] and their contribution to the performance of European enterprises". The Communication includes an economic analysis of the sector based on official statistics even though "these do not fully reflect the scale of the sector and its economic importance". The analysis points out that this sector has been the main source of job creation in the EU, especially in knowledge-intensive services. The business-related service sector has also been the most dynamic in terms of establishment of new enterprises, with more than two-thirds of start up enterprises.

11. Apart from policy issues related to improving the performance of the sector some important statistical issues were highlighted. It was concluded that knowledge about business-related services is scarce, which hampers the decision making of enterprises and policy makers; also the outputs of these services are not well valued, with insufficient information on intangible assets. Further it states that:

- there is an urgent need to improve the level of economic information and analysis, in particular through improved services statistics. The essential role of business-related services for the growth and sustainable development of the EU economy is not fully recognised by business operators, professional organisations, economists, policy makers and the media. The main reason is that existing research and statistics do not properly reflect the role of services in the economy. Improvement of the knowledge and statistical coverage of business-related services is an important area for action in order to better understand the real forces behind competitiveness. This is an essential instrument to guide decision making by business operators, policymakers and other stakeholders and to monitor progress in the implementation of policy areas of action described in this Communication.

- The fact that the duration from the time of the presentation of a proposal for new statistical data to the time of availability of data is long, explains the approach of presenting a relatively detailed strategy in annex III "Statistics on the services sector – outline of user needs in a long-term strategy" simultaneously with this Communication and the proposed policy actions. The improvement of services sector statistics has to be seen in the full context of collecting statistical information on enterprises. In order to manage the level of the respondent burden on enterprises, priorities for statistical requirements related to enterprise statistics have to be established.

This information need is currently being reinforced by negotiations on a proposed EU Directive on services in the EU internal market.

12. A second noteworthy political initiative concerns statistics of small and medium-sized enterprises, which include a very high proportion of services enterprises. The 2nd OECD Ministerial Conference on Small and Medium Enterprises (SMEs) in Instanbul in June 2004 supported some strong recommendations on statistics including as follows[4]:

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2   (COM) 2003 747 final available at
        http://europa.eu.int/comm/enterprise/services/business_related_services/documents_brs.htm

3   Business-related services are defined in the paper as "business services, distributive trades, network services
        and financial services"

4   More information can be found at http://www.oecd-istanbul.sme2004.org.

- Harmonising statistical methodologies and concepts through the formulation of target definitions;

- Prioritising among data collections; promoting data linking (e.g. between enterprise performance and trade data), strengthening the co-ordinating role of NSOs to better enable the use of existing information sources;

- Exploring the possibilities for longitudinal analyses;

- Investigating possibilities to develop up-to-date (quarterly) indicators.

13. Many services are supervised and regulated by various ministries or specific regulatory bodies such as financial, health, education, tourism, transport, environmental, cultural and legal services. These regulatory institutions seem to be increasingly interested in international comparisons of the economic contribution these particular activities make as well as in the impact of changes in trade, whether actual or potential if markets were to be liberalised. Improvements in service statistics require good co-operation between relevant government institutions.

3. Principal services measurement issues

14. Services statistics, it is generally acknowledged, have progressed significantly over the past twenty years. This has been aided by the development of a comprehensive taxonomy for services products, the Central Product Classification (CPC), the International Standard Industrial Classification of all economic activities (ISIC), the System of National Accounts (SNA), the Balance of Payments Manual (BPM), Eurostat's Handbook on Prices and Volume Measures and the Manual on Statistics of International Trade in Services. These have set out basic concepts, definitions, frameworks and international standards for describing services and compiling statistics. As these frameworks have been implemented, more data which are internationally comparable have become available. Nonetheless there remains much to be done and many complex conceptual and practical challenges to overcome.

15. There is widespread agreement in many areas about how services activity should in theory be measured but in practice is much more complex, varied and often inadequate. There also appears to be a broad consensus on certain basic measurement questions relating to services that need to be answered by economic statisticians. These include the very fundamental problems such as:

- What is the real output of services?

- How to measure international trade in services?

- How to strengthen the statistical infrastructure to yield more reliable data on services?

- Problems related to surveying service activities, while limiting cost and respondent burden, given the high number and proportion of small enterprises among those providing services.

16. This basic question on how to measure real output of services can be broken down into a number of component problems including: how to classify service products and activities; what is the size and structure of the services sector, defining output, how to measure current price services output and inputs; how to deflate the output etc. Other specific problems could include: developing country issues; employment issues; sectoral issues including tourism, health services, financial services, and the public sector; policy relevant issues such as analysis of relationships between services and the rest of the economy, productivity measurement; and special issues such as how to assess the quality and quality change of services. A summary list of services measurement issues is set out in Table 3.

17. To establish an internationally comparable methodology for measuring the real outputs of the service industries the Voorburg Group (a group of international experts working both in NSOs and IOs) was created in 1987. Furthermore, the Group agreed to contribute to the development of the services areas of the two United Nations Classifications, International Standard Industrial Classification of all Economic Activities (ISIC), Rev 3 and the Central Product Classification (CPC). Subsequently, the purpose of the Group was expanded to address services statistics more generally, including topics such as prices of service products; international trade in services; and employment, skills and occupations in the service sector.

18. With the growing economic importance of the services sectors and the emergence and rapid uptake of information and communication technologies, the statistical institutes were confronted with urgent user needs for developing statistics covering these phenomena. In order to utilise the scarce resources of the NSOs most efficiently, the Group has emphasised the importance of international co-operation both between national and international institutes in order to avoid duplication of work and to further the development of work related to definitions and methodology, needed for the future production of services statistics. In the meantime, several working groups have been established to address specific measurement issues linked to the services sector.

4. Recent developments on selected measurement issues

19. The quality of services statistics has improved in many countries over the last decade, but the high number of potential users and the increasing demand for such statistics can create the impression that statisticians are far from satisfying users of service statistics. This section highlights some of the activities undertaken at international level to increase the availability of methodological standards and classifications on the services sector. In particular, in 2004 activity has intensified on the co-ordinated revision and updating of the fundamental frameworks that underpin production of useful and comparable statistics on services. These include the System of National Accounts planned to be updated in 2008, the Balance of Payments Manual due for revision in 2008, and international classification of industrial activities and products (ISIC and CPC) to be revised in 2007. Because of their fundamental nature, these revisions will have knock-on effects on other manuals for example, the Manual for International Trade in Services - to be revised by 2009 - and the OECD Benchmark Definition of Foreign Direct Investment.

System of National Accounts (SNA) update

20. The Inter–Secretariat Working Group on National Accounts (ISWGNA) is responsible for leading the updating of work on 1993 version of the SNA. The ISWGNA has an Advisory Expert Group, which has approved a proposal to refine the definition of insurance and reinsurance output. It has also reviewed provisional recommendations made by the OECD Task Force which is addressing the measurement of the output of financial services. Other issues being considered in the SNA update, which could impact on the measurement of services include:

- The treatment of non-financial assets and the revenue flows stemming from the leasing or right to use these assets e.g. software, copyrights on music and film, R&D etc. (issues being addressed in Canberra II Group).

- Capitalisation of R&D expenditure.

- Services from government-owned assets.

Table 3 - Summary of services measurement issues

Description	Sub-issue
Service statistics strategy	
Classifications	Classifications of activities/products/international trade
Measurement of real output of services	What is the size and structure of the services sector?
	Definitions of services output
	Measuring current price output and inputs - turnover/value added by activity - turnover by product - purchases - labour/human capital - technology/capital inputs - demand for services - supply-use/input-output
	Measuring output volumes - services producer prices (deflation of services output) - direct volume measures of output - estimating services export and import prices - short-term service output indicators (ISP) - business tendency surveys - estimation of services output volumes in national accounts
Measuring international trade in services	Balance-of-payments trade in services
	Trade by mode of supply
	Foreign-affiliates trade in services
	Mode-4 trade in services
	Trade indicators
Surveying service activities	Business registers
	Statistical units
	Business statistics: choice and definition of variables, size class, coverage of service sectors
	Problems of multinational corporations
	Respondent burden
Other policy relevant issues	ICT and Information Society Statistics
	R&D Statistics
	Innovation statistics
	Science and technology indicators
Specific sectoral issues	Tourism/Financial/Insurance/ ICT/ Business Services/Distributive trades/ Transport/ Dwelling services/Health/Education/Government/ Public sector/Cultural services/ Household production
Specific developing country issues	Disseminating methodological work
	Technical assistance – expert networks
	Informal economy
	Non-observed economy
Special measurement and analytical issues	Assessing quality and quality change of services
	Measuring productivity of services
	Voluntary unpaid services
	Non-profit institutions
	Analysing the relationship between services and the rest of the economy
	International sourcing of services
	Service flows from use/leasing of non-financial assets

- Originals and copies (e.g. software).

- Guidelines on determining residence of firms and individuals including foreign students, sailors, foreign temporary workers (also BPM revision).

- Informal sector.

- Goods for processing and merchanting

Further information on the issues being considered for the SNA update and progress can be found at http://unstats.un.org/unsd/sna1993/issues.asp.

Balance of Payments Manual (BPM) revision issues and services

21. The Balance of Payments Manual revision is supervised by the International Monetary Fund IMF), under the advice of the IMF Committee on Balance of Payments Statistics (BOPCOM). A list of revision issues has been agreed. The BOPCOM has established some technical expert groups (TEGs) to take forward work and advise it on these issues, especially direct investment issues, issues related to monetary unions and other balance of payments issues. IMF expects to finalise the proposed revisions in 2006.

22. Balance of Payments issues which could impact the measurement of services include: residency of firms and individuals, classification of services within balance of payments (links to UN classifications work), the borderline between trade in goods and trade in services e.g. for repairs, goods for processing; re-exports, merchanting; information products and originals. More information on the BPM revision process and the issues can be found at http://www.imf.org/external/np/sta/bop/bopman5.htm.

Classification revisions

23. The Statistical Division of the United Nations (UNSD) conducted in 2004 a world-wide consultation on the detailed draft of the proposed ISIC Revision 4 classification of activities. The UN Expert Group on International Economic and Social Classifications and its Technical Sub-group (TSG) plan to finalise ISIC towards the end of 2005 for submission to UNSC for approval.

24. The ISIC draft has expanded the detail on services considerably resulting in four more sections (21 against 17 for ISIC rev 3.1), and 27 more divisions (87 against 60 for ISIC rev 3.1). It has set out to facilitate the convergence of the international and regional[5] classifications. A new Information and Communication section has been proposed. The sections on professional, business support services, culture, recreation and human health services expanded. Water supply is combined in a section with some environmental activities and services. ICT aggregations have been facilitated.

25. The TSG in June 2004 invited proposals for a revised CPC. It is anticipated that within the current broad structure of CPC, services will be elaborated somewhat more. A new grouping of information products is being considered. Proposals are expected on ICT services, tourism services and health services. Research done for the North American Product Classification System (NAPCS) will be reviewed for potential use in an international context. The TSG plans to draft a detailed proposal for CPC for a worldwide consultation in 2005.

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5   The European Classification (NACE), the North American Classification (NAICS), the Australia-New Zealand Classification (ANZSIC), etc.

26. Improving services product nomenclatures and promoting their use in business and trade statistics should remain an important medium to a long-term aim.

International trade in services

27. Aware of the likely impact of the updates/revisions of the SNA93, BPM5, ISIC and CPC, the Interagency Task Force on Statistics of International Trade in Services (ITFSITS) has agreed to update the Manual on Statistics of International Trade in Services (MSITS) by 2009 in order to maintain its usefulness and relevance for countries. The update will be limited in scope, but will include a review of the Extended Balance of Payments Statistics (EBOPS) classification and more material on the measurement of mode 4 supply of services.

28. Given the demand from many countries to understand better the importance of trade in services in their economies, ITFSITS has a number of activities aimed at promoting and monitoring the implementation of MSITS. The international agencies have an ongoing practice of sharing information on future technical assistance events and seminars on trade in services, in order to avoid duplication and combine scarce resources where appropriate. The shared information is compiled by and available from the IMF.

29. The commitment of the EU to obtain better statistical information regarding trade in services is reflected in two legal initiatives:

- the newly adopted (June 2004) Regulation of the European Parliament and of the Council on Community statistics concerning balance of payments, international trade in services and foreign direct investment;

- the development of a Regulation of the European Parliament and of the Council on Community statistics on the structure and activity of foreign affiliates (FATS).

Moreover, a "Recommendations manual on the production of foreign affiliates statistics (FATS)" is being developed by the Eurostat "Joint Working Group on FATS (Foreign Affiliates Statistics)" in order to provide the common methodological framework for those working on the collection, compilation, transmission and analysis of FATS.

30. The Task Force co-ordinates data collection activities of international agencies related to trade in services to minimise duplication. IMF collects EBOPS components for trade in services on a voluntary basis as part of the balance of payments data collection. OECD collects and publishes both FATS data and trade in services data by partner country. UNCTAD continues to collect data on the activities of foreign affiliates, including those in the services sector. UNSD is developing a worldwide database on trade in services statistics, detailed by partner country, service category and mode of supply, which the other data collections will feed into.

31. OECD and Eurostat are working together to monitor implementation of the MSITS and data quality. A paper was provided to the IMF BOP Committee in 2004. A Eurostat-OECD Methodological Soundness Questionnaire on measurement of trade in services in the balance of payments, which was issued in 2003, has already yielded useful information from around thirty countries.

32. The OECD will publish in 2005 The Handbook on Economic Globalisation Indicators, which provides guidance on the measurement of the internationalisation of production, international mobility of resources and increasing interdependency of national economies. It sets out amongst other things a framework for measuring activities of multinationals and foreign affiliates' trade in goods and services. The OECD

Globalisation Experts now plan a project on defining and measuring "offshoring", which is one aspect of the internationalisation of production of goods and services.

33. The UNSD have set-up a technical sub-group to the ITFSITS to work on the measurement of the movement of natural persons including trade, migration and employment statisticians. The aims of the group include:

- contributing an appendix to the revised BPM5 chapter on residence. It will concern individuals and households with connections to more than one territory and supplementary presentations of data;

- contributing a chapter to the updated MSITS on Mode 4 supply of trade in services (presence of natural persons); and

- improving data on remittances.

34. Finally, measurement of the international movement of persons and the remittances they send to their economies of origin are the subject of a number of statistics initiatives related to not only trade in services, but migration, development and other policy areas (the World Bank, IMF, and UNSD have recently launched an initiative to progress this work).

Short-term indicators for services

35. In response to the demand for more short-term statistics on services output, from central banks and the needs of monetary policy, the OECD Short-Term Economic Statistics Expert Group (STESEG) Task Force on services is preparing a manual on Index of Services Production (ISP). A partial draft and outline was presented to the Voorburg Group in Ottawa in September 2004. An updated version of the draft is being prepared for the February 2005 meeting of the TF. It is anticipated that the Manual will be completed by 2006, subject to the approval of the OECD Statistics Committee. There are also questions about the ISP's periodicity (monthly or quarterly), sectoral coverage (market services or all services) and relationship with national accounts, which will be subject to further clarification.

36. The OECD Statistics Directorate has also recently developed its reporting of business opinion tendency surveys to cover services, working with the European Commission and national research institutes to improve the overall comparability of these data across the OECD.

Prices and volumes

37. The work on services prices and volumes is fundamental to achieving better measures of real services output and growth. Improving current practice and international comparability are high priorities as reflected by the range of recent and current activity on this theme. They pose both conceptual and practical challenges.

38. The **Voorburg Group** has been working in recent years, as a main activity, on basic methodological issues related to services PPIs. They have overseen good progress, helping to stimulate a considerable growth in national activity in the measurement of these prices. The heterogeneity of services has necessitated a service-by-service approach. Outputs have been in the form of principal papers, representing several countries' input on prices of particular types of services in a standard format, which have been particularly useful. At the 2004 meeting three principal papers on i) Air transport prices, ii) Telecommunications prices, and iii) Property and Casualty Insurance prices, were presented. Candidates for future principal papers were tested and discussed in mini-sessions.

39. The Inter-Secretariat Working Group on Price Statistics (IWGPS) has developed a PPI Manual, which covers conceptual principles for PPIs for goods and services and some practical guidance (see http://www.imf.org/external/np/sta/tegppi/index.htm). The IWGPS has also established a technical expert group, convened by IMF, to produce a manual on export and import price indices covering both goods and services. A draft Manual should be submitted by summer 2005 to the IWGPS. More information and some draft chapters can be found at http://www.imf.org/external/np/sta/tegeipi/tor.htm .

40. The joint OECD-Eurostat Task Force on Services Prices in Short-Term Statistics was established in 2002. The work is closely connected to the development of an EU regulation by setting priorities to develop various PPIs. In 2004 the TF started to draft a guide for the compilation of PPIs for services. The guide will supplement the recently finalised PPI Manual, which covers goods and services in the area of services by discussing various compilation practices industry by industry. The first draft of the guide will be circulated to countries for comments in the next few months. Information can be found in the OECD website at http://www.oecd.org/document/43/0,2340,en_2649_34355_2727403_1_1_1_1,00.html, where results of the 2004 OECD-Eurostat-Voorburg Group survey on the national collection of services producer prices are now available.

The Atkinson Review

41. In 2003 the UK Office for National Statistics, after some years of experience in publishing estimated direct output volume measures for a range of public/government non-market services, commissioned an independent review of the measurement of government output in the national accounts. The resulting report, known as the "Atkinson Review", was published in January 2005.

42. The report elaborates a basic set of principles for such output measures, including presentation and documentation. The interim report has attracted a good deal of international attention and it appears likely to have an impact on statistical work beyond the confines of the UK. The question has been raised as to whether the SNA93 needs some clarification in the guidance it provides in this respect. More information is available at http://www.statistics.gov.uk/about/methodology_by_theme/atkinson/

Business statistics

43. With the increasing policy and analytical interest in services, their competitiveness and the effect they have on the competitiveness of the rest of the economy, attention has been given to the basic infrastructure of business statistics. This includes business registers, units, classifications, definition of variables and firm-level data, and has highlighted problems of lack of international comparability. In particular, the European Commission and the OECD have been co-operating in their work on business-related services.

44. The Eurostat strategy aims to consistently put services statistics on an equal footing with manufacturing. In particular, draft Council regulations are being discussed to:

- increase the sectoral coverage and integrate enterprise groups into the business registers, registration of links between international enterprise groups is also planned;

- revise the activity (NACE Rev.1.1) and product classifications (CPA) in accordance to changes in ISIC and CPC;

- revise the Council Regulation 58/97 on Structural Business Statistics to increase the coverage, level of detail and the number of variables and breakdowns available for services. Several projects are ongoing to develop more harmonised data on business services, business

demography, foreign affiliates, demand for services, inter-enterprise relationships and factors affecting enterprise success.

45. The OECD organised a service statistics workshop in November 2004 to discuss the following issues:

- Measuring the integration of manufacturing and services. A particularly important issue in the context of the growing role of services concerns the interaction between different sectors of the economy and the ways in which these interactions could potentially be measured. This session examined the use of input-output Tables, and found that these are not always available at a level detailed enough to address questions regarding the evolving nature of supply chains. The session also explored the use of firm-level data, e.g. how the composition of the economies differs according to the use of enterprise versus establishment data and how much manufacturing value added originates from service activities. The session also explored the use of data on occupations, which can show the changing composition of the services and manufacturing workforce.

- The measurement of output and productivity in services. Measuring output and productivity in the services sector remains a key challenge for all countries. Many official measures point to negative or poor productivity growth in key parts of the services sector, despite evidence of a growing dynamism in many parts of the services industry. Better measures of productivity are being developed in some OECD countries; the workshop discussed alternative approaches to productivity measurement in services. The session focused on output measurement in retailing productivity, an important sector that accounts for much of the variation in productivity growth across OECD countries.

- Micro perspectives on the services sector. Available firm-level statistics demonstrate that most growth of new firms and new jobs occurs in the services sector. Growth is also driven by the allocation of resources from high to low productivity firms within the services sector. This session discussed statistical and empirical work with firm-level data that is currently underway across OECD countries and the implications for our understanding of growth in the services sector.

The presentations from this workshop are available at the OECD Internet site, at: http://www.oecd.org/document/46/0,2340,en_2649_34445_34055470_1_1_1_1,00.html.

46. In response to a strong analytical need for more internationally comparable business statistics, the OECD has set up an EDG Task Force to examine with national experts commonalities and differences in structural business statistics between European, North American and Asia-Pacific member countries. This group has been set up following the Ministerial Mandate received from the 2nd OECD Conference of Ministers for SMEs (Istanbul, June 2004) and is looking at reporting units, variables, classifications and size classes. It covers both annual Structural Business Statistics and Business Statistics by Size Classes as well as industry and services in terms of sector coverage. The aim is to develop target definitions and recommendations to improve future cross-country comparability.

Information society statistics

47. The OECD's Working Party on Indicators for the Information Society (WPIIS) has been addressing the need for international standards for Information and Communication Technology (ICT) statistics since 1997. Since its inception, the WPIIS has emphasised ICT production and consumption statistics with the following standards now in place: a classification of the ICT sector, a classification of ICT goods,

definitions of e-commerce transactions (Internet and all computer-mediated networks), model questionnaires covering ICT use and e-commerce by businesses, households and individuals.

48. Substantial progress has been made on development of a classification of ICT services (to complement the goods classification finalised in 2003). The proposal is based in part on the North American Product Classification (NAPCS) and is expected to be taken into account for the 2007 CPC revision. If the UN approves the WPIIS recommendations and incorporates the changes into the CPC, an ICT Services definition will be finally agreed by the OECD in 2006.

49. The 2004 meeting approved a revised outline for a guide on information society measurement. The Guide will serve as a repository for the statistical guidelines produced by WPIIS and will also include metadata information on member and non-member country work in the field of ICT statistics. It will form a major OECD contribution to the work programme established after the World Summit on the Information Society (WSIS) and is expected to be completed by the next WSIS meeting in 2005.

50. Both the OECD model surveys of ICT Use by Businesses and Households/Individuals were being revised during 2004. The aim is to improve harmonisation with European and other member countries' ICT usage surveys, as well as re-orient the surveys towards areas of high policy-relevance such as digitised products, mobile access, IT security, e-business and e-government. A preliminary revision of the household/individuals survey was presented to WPIIS in May 2004 with the goal of finalising the changes by the end of 2004. A preliminary revision of the business survey was also presented in 2004, with revisions likely to be implemented in two stages. The first stage would see incorporation of a large number of "updating" revisions and possibly some new material (for instance, IT security) by the end of 2004. The second is to incorporate remaining new material, including a module on e-business processes for the 2005 meeting.

51. Although a lot of work has been done, there are many statistical issues and challenges in the Information Society field. The short to medium term work program includes tackling a number of issues: further progressing the proposals listed above; finalising a classification of ICT services; making progress in new areas including digital content, privacy, trust and security. This work will involve data compilation from a variety of sources as well as conceptual work such as framework development.

52. Eurostat started annual Community surveys on the ICT use in enterprises and in households/by individuals in 2001 and 2002 respectively. Eurostat provides the model questionnaires for these surveys that are conducted by the National Statistical Institutes (NSIs) of the Member States, and maintains the European Community database. Most of the Member States have participated on a voluntary basis. A close collaboration between Eurostat and the OECD has ensured co-ordinated efforts towards a harmonisation of methods and data collections.

53. In April 2004 an EC Regulation on Information Society Statistics was adopted as a legal basis for these surveys. It will ensure harmonised data for all EU-25 Member States, other EEA countries and the Candidate Countries from 2006 onwards. In addition, Eurostat has built a database on telecommunications for the EU-25 Member States and the Candidate Countries, and co-operation with the ITU is ongoing.

54. As a co-organiser of the "World Summit on the Information Society" in December 2003 in Geneva, Eurostat has offered to build on its experience for developing a list of core indictors and modes of data transmission for the global database. A Methodological Manual for the ICT usage surveys in the European Community, which is foreseen for 2005, could be offered to complement the planned guidebook on Information Society Indicators.

55. Finally, jointly sponsored by several IOs, a meeting "Measuring the Information Society" took place in Geneva on 7-9 January 2005. Its aims included agreeing to a list of core ICT indicators to be collected by all countries, including on basic access and usage by households, individuals, businesses and schools; identifying technical assistance needs; identifying those ICT indicators that are relevant to the Millennium Development Goals; and presenting progress towards an international database on ICT indicators. The outcome of the meeting will serve as an input to the second phase of the World Summit on the Information Society.

Health services

56. Health accounting work at the OECD was given high priority by the Communiqué of Health Ministers, issued at the first meeting of OECD Health Ministers held on May 13-14, 2004. OECD Experts in National Health Accountants are working on promoting adoption and implementation of the OECD System of Health Accounts (SHA) published in 2000. They have made proposals on the revision of ISIC and CPC to bring these more into line with the International Classification for Health Accounts (ICHA).

57. Eurostat and OECD are examining possibilities to co-operate on data collection on SHA and participation in the Intersecretariat Group on Health Statistics established by the UNSC in 2004.

Tourism statistics

58. Tourism statistics have been subject to international co-operation for many years. The most recent outcome was the "Tourism Satellite Account: Recommended Methodological Framework" (TSA) published by four agencies in 2001. The UNSC in 2004 "stressed the need for stronger co-ordination in the field of tourism statistics and in the periodical revision of international recommendations. Accordingly the Interagency Co-ordinating Group on Tourism Statistics, was created in 2004 and will consider, at its February 2005 meeting, proposals to update the TSA, and the 1993 UN Recommendations on Tourism Statistics.

59. The World Tourism Organisation (WTO/OMT) has made a number of proposals for the revision of BPM5, ISIC and CPC to increase harmonisation of concepts between these frameworks and tourism statistics and to make them more useful for the collection of tourism statistics. WTO/OMT has developed a model survey of visitor expenditure related to inbound tourism, which could also be useful in the collection of inbound travel expenditure for the balance of payments. On the other hand, Eurostat has started work to revise and update the European legislation on tourism statistics. Work done in EU member states in 2003-2004 on the tourism satellite accounting exercise will need consideration regarding whether and in what way the official TSA framework should be revised.

Household Production Accounts

60. Household production results from the combination of unpaid labour, goods, services and capital. The output of households' productive activities is not transacted in the market, and therefore carries no monetary value. Most of it is not recorded in national accounts. As a result, the size of household production has been largely unknown. This has been the subject of extensive research over many years and there have been a number of attempts to value unpaid household labour in monetary terms have been made by countries using essentially two approaches: the input approach or the output approach.

61. The input approach is the most standardised method. It has traditionally been used to estimate the value of unpaid work in households or household production. Time use surveys provide an important data source for this method. In national accounts valuation of outputs is the preferred method for the measurement of production. The discussion on this approach for the purposes of household satellite accounts has greatly

benefited from the experimental household satellite accounts produced by UK Office for National Statistics in 2002.

R&D and innovation statistics

62. The OECD Working Party of National Experts on Science and Technology Indicators (NESTI) aims to improve the methodology for the collection of internationally comparable data for measuring the input, output, diffusion and impact of science and technology. In 2002 NESTI completed the fifth revision of the Frascati Manual on surveys of research and development which, among other things, aimed to strengthen the coverage of R&D in services; for example by recommending that R&D expenditure be broken down by product field (or industry served) rather than classified by the principal activity of the enterprise/organisation performing the R&D.

63. New Eurostat Regulations for data production on R&D statistics and Innovation statistics have recently been adopted. A harmonised Eurostat/OECD questionnaire on R&D Statistics is under preparation, with better coverage of services. OECD and Eurostat are currently working on a second revision of the OECD/Eurostat Oslo Manual on surveys of innovation. The first edition of the Manual (1992) focused on measuring technological product and process innovation in manufacturing. The first revision (1997) had already broadened the scope of innovation surveys to service sectors, and the current one will extend the concept of innovation beyond technological innovation to better reflect innovation in services by also including marketing and organisational innovation. It is planned that the revised Manual should be agreed at the June 2005 meeting of NESTI. Finally, Eurostat's fourth Community Innovation Survey has been prepared with improved coverage of services.

5. Main conclusions and priority areas to address and invest in regarding services statistics

64. Even if the quality of services statistics has improved in many countries over the last decade, the high number of potential users and the increasing demand for such statistics can create the impression that statisticians are far from satisfying users of services statistics. It is quite clear that any medium-term policy to substantially improve services statistics requires adequate resources and a strong commitment from top managers in charge of statistical operations. In particular, efforts to improve services statistics should be aimed at implementation of existing standards, strengthening the statistical infrastructure and tackling conceptual and methodological difficulties. In the following paragraphs we will try to identify key issues both for international/supranational bodies and for national statistical agencies.

65. Firstly, the overall review carried out by the OECD shows that several international initiatives are trying to address conceptual and methodological issues. The degree of coherence and co-ordination of such efforts is quite good and has been assisted by this co-ordination effort. Without emphasising too much the results already achieved, it is possible to say that the global awareness on what each research group on services statistics is doing has increased and the same can be said for the accessibility to documents produced by individual groups.

66. Secondly, regarding methodological work, the review has demonstrated that there are no major gaps in the international agenda on developing services statistics. The major co-ordinated 1993SNA/BPM5/ISIC/CPC revisions are expected to provide a new impetus to progress on services statistics.

67. Thirdly, development work on services prices and volumes is fundamental to measurement of growth and needs to continue. Consideration should be given to the implications of the UK "Atkinson Review" for international practice in measuring the output of public services.

68. Fourthly, there is a need to engage more countries in the services statistics agenda to understand the importance of services in their economies. From the international organisations' point of view it would be necessary to:

- enhance co-ordination of interagency technical assistance and co-operation on this matter;

- disseminate methodological developments in various languages to those who need them;

- involve a wider range of countries in expert groups;

- give more attention to implementation of existing standards and manuals, the monitoring of implementation, data quality and comparability;

- review data collection and dissemination activities carried out by international organisations to appropriately reflect the contribution of services to modern economies.

69. From the national statistical offices' perspective it can be very helpful to develop an overall strategy for the measurement of services. As new statistical projects usually take time to produce reliable figures, a careful planning of actions to produce new services statistics is absolutely necessary. Special attention should be given in many countries to the development and improvement of statistical infrastructure underpinning statistics on services, in particular structural business statistics (e.g. business registers, units, classifications, definition of variables), development of product data, trade in services statistics and linking datasets. Short-term indicators about the turnover/production of the services sector, as well as indicators on producer prices for services, also deserve special attention. Moreover, the improvement of services sector statistics has to be seen in the full context of collecting statistical information on enterprises. In order to manage the level of the respondent burden on enterprises, priorities for statistical requirements related to enterprise statistics have to be established.

70. Although many difficult methodological issues remain, one of the main messages that emerge from this review is that a wide range of methodological guidelines are already available covering most subject areas. The implementation of existing guidelines would allow any country to significantly improve the quality of its services statistics. Many useful experiences in implementing international guidelines are potentially available as well. Therefore, it is mainly for individual countries to invest more on this sector, moving this topic up on the list of priorities.

71. In terms of international comparability the situation is far from being satisfactory. If all countries were able to implement all existing international guidelines the situation could still remain problematic in terms of comparability, especially as far as GDP growth is concerned. As a Eurostat survey of approaches to measurement of value added of services shows, there are various ways to implement methodological guidelines developed at international level. This is an area where international organisations and national agencies could and should do more to develop more precise lists of recommended practices.