THE VOORBURG GROUP'S TENTH ANNIVERSARY: A REVIEW OF ACHIEVEMENTS

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Introduction

The Voorburg Group was constituted to assist the United Nations Statistical Office to develop the services part of the Central Product Classification. At least that was the reason that led to the Group's constitution and first meeting four months from the time it was first discussed by agency heads. The question that should be answered, as the Group holds its tenth annual meeting, relates to the factors that contributed to its success and the degree to which it has started to fulfill the hopes of those who founded it.

A number of considerations came together in order to launch the Group. It was concerned with an important subject about which even the countries that could boast of the most sophisticated statistical offices knew relatively little. Countries knew that the share of services, in their overall output of goods and services, amounted to two thirds or more. Trade in services was fast becoming an important component of countries' external current account. The GATT's forthcoming round of negotiations threatened to spend at least as much time on trade in services as it did on goods. There was no international statistical initiative designed to mobilize resources and pull them together in the direction of harmonization or even comparability. And national statistical offices felt that their budgets were under scrutiny and that they could not embark on a costly conceptual and operational initiative with impunity.

Voorburg Group
Participating Agencies

ABS, Australia
BEA, BLS, USBC, U.S.A.
CSO, United Kingdom
INSEE, France
Management and Coordination Agency, Japan
Statistics Canada
Statistics Denmark
Statistics Finland
Statistics Netherlands
Statistics Norway
Statistics Sweden
Statistisches Bundesamt, Germany

UNSD
EUROSTAT
SD - OECD
SD - IMF
SISD - GATT/WTO

The constitution of the Group had great appeal because it appeared to provide an answer to some of the concerns shared by its founding agencies. For example, an informal group could change venue flexibly; dispense with language requirements as needed; promote the sharing of knowledge and experience; base its deliberations very directly on lessons learned directly from survey experience; alter its agenda as a function of changing user interests; and still fulfill a much needed advisory function to established international agencies.

The Voorburg Group's scope and range of interests was never limited to the development of a product classification although, between the first two meetings, classification efforts must have consumed most of the energies of Group members. Right from the beginning participants wanted the Group to address the matter of service statistics in the broadest possible fashion.

The Results of Ten Meetings

The Voorburg Group will have met for close to fifty working days. In between meetings, leaders and supporters, more recently members of the special group on Classifications, and the bureau of the group must have spent several multiples of this time engaged in the planning of forthcoming meetings and in meeting commitments made during meetings. The results of this unprecedented input - quite different in its character from say the input that went into the most recent revision of the SNA - can be classified under four broad headings, that would be recognizable to anyone who has taken part in the Group's meetings. These headings are:

Voorburg Group Meetings

1987 (Jan.)	Voorburg
1987 (Nov.)	Stockholm
1988	Wiesbaden
1989	Ottawa
1990	Paris
1991	Helsinki
1992	Williamsburg
1993	Oslo
1994	Sydney
1995	Voorburg

- it has developed the CPC for services and shown a concrete example of how a standard international classification can be developed by informal sharing arrangements among interested countries;

- the Group has developed a framework of model surveys that serve as a workbench to engage in comparisons among countries and can also be used to test the adequacy of the CPC;

- it has helped review international guidelines for measurement of production in constant prices and used its collective knowledge to expand and improve the original recommendations;

- the Group has put forward an approach to measuring the price of service outputs and discusses, regularly, new approaches and experiences;

- the Group has called for the formulation of a systematic approach - a strategy - to the measurement of economic activity in the services sector.

By exchanging information on country experiences, with respect to all facets of a services statistics program, countries have benefited from each others experience and saved resources by avoiding duplication of methodological research already undertaken elsewhere. The example of the Voorburg Group has led to the formation of a number of other such groups:

- the Ottawa Group to review price statistics and indexes;

- the London Group for the study of environmental issues;

- the Siena Group for the study of social statistics.

The work of the Voorburg Group has been of considerable importance to those international statistical offices that are concerned with the accurate measurement of economic activity in the services sector. The Group has set an example of how international work can be organized and, particularly, how informal arrangements can be of help to more institutionalized arrangements.

It would be wrong to pretend that the Voorburg Group succeeded in every single one of the issues which it addressed and discussed. With many, after several rounds of discussion, the Group had to leave them aside, at least temporarily, because no visible progress appeared to be possible. With others, even though they were re-examined at every single meeting, there is still not much to report in terms of progress. But if there is one matter in which the Group's action can be criticized, it is in its failure to keep data users, all over, well apprised of Voorburg's successes and failures. As a result, even today there are otherwise well-informed data users who are unaware of how much progress has been made since January 1987 and who keep on referring to the service sector as something that is not measured; not understood; and not the subject of concerted attention by responsible statistical agencies.

Defining and Classifying Services as Products

The Voorburg Group adopted, from the outset, the labour sharing approach to all its collective undertakings. It could hardly do anything else. As a Group formed of volunteers without a permanent secretariat or dedicated research facilities, its only staff was the staff that its participants could mobilize and commit out of their respective institutions. This approach served the Group well in its first endeavour: to define and classify services as products with a view to use the results of this activity as input to the Central Product Classification (Services).

The Voorburg Group got involved in this activity at the request of the Statistical Division of the United Nations (UNSD), and in order to help meet a commitment to the UN Statistical Commission. As it were, this provided a real test of the Group's effectiveness, as well as a test of the efficiency of the approach it has adopted.

The Services Sector was split up into segments and each allocated to that national office whose representative on the Group felt it could handle best. In order to ensure a modicum of consistency, countries interlocked - at the same time as they volunteered to engage in one exercise, they volunteered to assist others and, in so doing, provided a sounding board, an additional source of inputs and an assurance that the classification would not be the result of very disparate proposals. *The outcome of this work, which covered all the services producing industries of ISIC Rev. 3, was presented to the 24th session of the United Nations Statistical Commission held in February 1989.*

There was another novel feature in the Voorburg Group's approach to classification development. Hitherto, international classifications (and probably a great many national classifications as well)

were developed behind a desk and in the framework of an expert group meeting, presented to the UN Statistical Commission by the Secretariat, and either approved as final, tentatively approved as provisional or sent back for further development. But once approved as final, they were virtually frozen until a new vintage replaced them. At no time did the international statistical community envisage the development of classifications as a process in which countries would be specifically invited to test in the field, a provisional classification, and be asked to report on the results so that the report could serve as a basis for further classification development.

The Voorburg Group asked the Statistical Commission to approve this form of approaching classification development. The testing of the adequacy of the classification started very soon after its adoption and, to date, Voorburg Group participants presented papers covering their respective agency's experience in using the CPC for Computer Services, Engineering Services, Accounting Services, Management Services and many other parts of the CPC. But the Group went further and decided that there ought to be a consistent framework for the testing of the adequacy of classifications it developed. *Accordingly, it launched a second initiative also designed to promote international comparability: the design of model surveys.*

Feeling that it was time to apply its collective experience, at its 1993 meeting, the Voorburg Group assigned, to its members, the task of producing a revised version of the CPC. Early conclusions of that exercise have already been transmitted to the United Nations Statistical Commission. One new feature in the Group's recommendations takes its inspiration from the way the Harmonized Commodity Description and Coding System (HS) is kept up to date by the Customs Coordination Council. The Group believes that the CPC should be regarded in the same way as a software release - ready for immediate use but subject to progressive improvement through regular up-dates. *This notion was warmly endorsed and the Group was asked to prepare a final version - release 1.0 of the CPC - for presentation at the 28th session of the Statistical Commission.*

Model Surveys

The advantage of relying on a group of senior members of national statistical agencies is that they are almost certain to bear in mind not only the development of the classification as an end in itself, but also the consequent steps required to see that the classification is implemented broadly and consistently. The Voorburg Group, mindful of the difficulties in handling the classification without any further guidelines or lessons learned from the experience of handling it, developed a series of model surveys that were expected to act as a workbench for the future improvement of the classification, in the context of its international comparability and the need to keep it in step with new technologies and organizational developments.

The model survey that served as guide and source of inspiration to all others was on Computer Services. The Voorburg Group sought to meet two objectives in proposing this sector as its initial target. First, it had to select one industry that was demonstrably at the root of users' concerns. And secondly, it was best to tackle one sector that, if handled subsequently according to the Group's recommendations, could make a significant difference to the quality of the data shown by the agencies taking part in the Group's discussions.

Model Surveys

A Model Survey for Computer Services - UNSD

A Model Survey for the Telecommunication Sector - STATISTICS CANADA

A Model Survey for Audiovisual Services - INSEE, FRANCE

A Model Survey for Marketing Research and Advertising Services - INSEE, FRANCE

A Framework for Improving Information on Insurance Services - EUROSTAT

A Model Survey of Insurance Services - STATISTICS CANADA

The model survey itself was designed to handle the estimation of value added or GDP in current dollars for that sector or industry, as well as to compile statistics relating to the domestic production and international trade in service products. Based on the conceptual framework of the production accounts of the national accounts, different modules covered: output and revenues from the sale of services; inputs, including purchased inputs of goods and services used; goods and services purchased for resale; labour, in terms of remuneration, employment and occupation; R&D expenditures, investment, capital expenditure and depreciation; and imports and exports.

The model survey provided a set of data items from which performance measures of service industries could be calculated or derived. More recently, there have been suggestions for the addition of new modules, such as one on innovation. Work on prices and price indexes for services has not yet reached enough maturity to justify the addition of a new module, but eventually such a module must be added not only for the sake of completeness, but because the matter of measurement of service outputs at constant prices is central to the concerns that have been voiced about the measurement of the service sector.

There has been some misunderstanding about the nature of the model surveys. For example, when it was first discussed at the 23rd session of the United Nations Statistical Commission, various delegates expressed concern at the inordinate length and complexity of the questionnaire. Even though it was pointed out then, it is important to continue pointing out that *the model survey was developed as a set of modules, to be adopted singly or together, to collect services statistics. The actual strategy of collection - the precise wording of each question and the manner in which the different modules should be dealt with - remains a matter for national statistical offices to decide.*

For example, the modules may be combined to create a single questionnaire designed to collect all the information required, or they may be incorporated into existing questionnaires. Not all the modules of the model survey are designed for inclusion in a survey of the principal industry. The model survey is intended to take a product approach. For example, in order to obtain an estimate of the total production of a particular service, questions found in the module relating to output would have to be addressed to all the secondary producers of the service as well as the principal producing industry or industries of the service. The model survey has a module to collect information about imports of particular services. In order to obtain an estimate of the value of imports of those services, this module must be part of a survey of all industries within the business sector as well as surveys designed to cover the various components of final demand, namely the personal and government sectors of the economy.

The model survey is not designed for any particular statistical unit. The unit to which each country targets the modules of the survey depends upon national practice. Countries whose tradition is to survey establishments are likely to interpret the model questionnaire as one that is primarily aimed at establishments. Some countries will address it to enterprises and some to both enterprises and establishments, leaving it to enterprises to distribute, to each one of its constituent establishments, that part of the questionnaire that is more efficiently handled by them.

Presented at the 23rd session of the United Nations Statistical Commission, the Model Survey of Computer Services was subsequently published in the series of United Nations technical papers (Series M, Number 81). Since then, other model surveys have been developed by the Voorburg Group for Telecommunications, Marketing Research and Advertising, and Audio-visual Services. Preliminary work was carried out for Banking and Insurance (Eurostat took the initiative to propose a statistical framework for insurance), largely to encourage members to look into the possibility of surveying these industries within a known and comparable framework.

The Model Survey of Computer Services received wide circulation. Within the Voorburg Group, a number of countries reported the results of its use. Papers, bringing together the results, were prepared for two consecutive meetings of the Voorburg Group. A second series of papers made inter-country comparisons among the composition and structure of telecommunications, audio-visual, insurance, and computer service industries in the Voorburg Group countries. So far, there have been no analytical conclusions drawn from these comparisons, but it is obvious from what efforts have been deployed, that comparisons among countries are going to require patience and considerable effort on the part of each. *It has also become obvious that past attempts to declare data comparable simply ignored the profound differences that subsist in the economic statistics of countries that have ostensibly adopted the same concepts and classifications.*

The experience with the model surveys shows that comparisons of the output module (first module in the questionnaire) were relatively successful. Countries tested the provisional CPC and either adopted it or else made proposals for changes, which have already been incorporated into the papers of the Classification Subgroup. However, with respect to the module on expenses, countries have found it difficult to obtain detailed input information and, as the aggregated classes for which they

have been able to obtain data vary in make-up from country to country, at this stage, no meaningful comparison can be made across countries.

To achieve the goal of international comparability of services statistics, considerably more work needs to be done to standardize the categories for which input data can be collected, to define the collection variables, and to delineate the units that constitute the observation target for these surveys. Eurostat has produced a framework for services statistics which other members of the Group are considering for adoption.

From Values to Volumes

The Group has discussed, at virtually every single one of its annual meetings, the matter of prices and quantities (or how to calculate outputs at constant prices) in the service sector.

In 1988, the United Nations Statistics Division circulated a questionnaire to national statistical offices requesting information on practices and views in respect of approaches to the calculation of real value added. The questionnaire focussed on approaches adopted and indices used to arrive at volume measures. The results showed that there was great variation among countries in the approaches adopted. It was agreed that the development of quantity and price indices for service activities had received scant attention and was, as yet, a relatively underdeveloped area of statistics, notwithstanding its importance. Even so, it was thought that countries embarking on compilations of data for the service sector should be given guidelines on how to proceed, particularly if those guidelines reflected the experience of others who were further ahead in measuring the activity of the sector.

Prices and Quantities

General Methodological Problems of the Q & P Indices of Services - UNSD

P & Q Indices of Services - UNSD

Volume Measures in ISIC 6 and 7 Services Industries: Country Practices as a Basis for International Guidelines - E.J. Flottum, STATISTICS NORWAY

Volume Measures of Services and Service Industries - Draft International Guidelines - **E.J. Flottum, STATISTICS NORWAY**

Comments on Mr. Flottum's Paper - STATISTICS CANADA

A document, entitled "Volume Measures of Services and Service Industries - Draft International Guidelines" by E. J. Flottum of Statistics Norway, was presented to the fifth meeting of the Voorburg Group for discussion. It attempted to set out, in a systematic and exhaustive way, international guidelines on price and volume measurement in the areas of distributive trades, hotels and restaurants, transport, and communications.

The draft Guidelines dealt with price and volume measures, both for the products of these industries at the four-digit level of the CPC, and for the calculation of constant price value added. The detail of the Guidelines followed the three-digit breakdown of ISIC Rev. 3. With respect to products, deflation was the method recommended for 85 percent of the items covered and direct extrapolation for the remaining 15 percent, which included products such as freight transportation and cargo handling. In general, direct estimation of prices was favoured over estimates based on the value of inputs, for the obvious reason that the later does not allow for productivity change.

The preferred method for arriving at estimates of constant price value added, advocated in the Guidelines, was the method of double deflation - separate deflation of gross output on the one hand, and of intermediate consumption on the other. This method was recommended for all but one of the 29 ISIC three-digit service industries covered by the Guidelines. However, it was acknowledged that value added could also be directly extrapolated, particularly when value added and price data were incomplete or non-existent.

In advocating the method of double deflation, given the inadequate level of development of service price indices, it was suggested that components of the Consumer Price Index, which would be available in most countries, could be used, though it was recognized that it was desirable that specific price indices be developed for purposes of deflation, particularly for business services.

The Voorburg Group supported the double deflation approach, particularly for the creation of base year estimates, but recognized that additional flexibility would be required for current estimates for which volume indicators might have to be used. While the Group commented on the Guidelines, its members did not always agree on the detailed methodologies described for each three-digit industry. Moreover, the Guidelines were considered, by a number of members, as unbalanced - too ambitious for international application in some areas and insufficiently advanced in others where more sophisticated methods than those advocated were, at least, in partial use. The Group's conclusion was that the Guidelines could be used as a source of inspiration, but were not designed for general applicability, particularly in the light of what UN member countries had to say in response to the UN questionnaire.

The document "Volume Measures of Services and Service Industries - Draft International Guidelines" is in the keeping of UNSD and can be made available to interested statistical agencies and other users.

Developing Product Price Indices for Services

In the area of price indices, the Voorburg Group has not taken any organized initiative comparable to the ones described above. It has simply encouraged its members to undertake initiatives and report on the results, in order to share experiences and encourage further international efforts in this area.

Though development has been slow, Voorburg Group countries have reported on both the theoretical and conceptual research undertaken and on the actual price indices produced for particular areas of ISIC Rev. 3 and the CPC, in the context of deflation of value data or to study price movements for their own sake. Some examples of this work are described below.

- Countries have explored the theory and practice of various methods - the hedonic approach, model pricing, observation of transaction prices, input prices, and indirect observation.

- A serious attempt was made to measure the prices of the services produced by *consulting engineers* using a model pricing approach.

- An area in which a model pricing approach met with more success was in developing price indices for *security* and surveillance *services*, and *commercial services*. For security services, the task was to establish a sample selection of actual contracts, which were representative of the type of client and type of services typically provided by firms providing security services. It was found that the rate of price change was more correlated with the supplier than with the type of client or type of service.

- Another method tried came close to a model pricing method and was tested for estimating price indices for *road haulage*. Quotations of specific services of a panel of carriers was used. The approach adopted was not dissimilar to that of transaction pricing because they did not face the same problem as in engineering services, where the same services were not provided by the same firms in consecutive years.

Prices

Developing Price Indexes for Consulting Engineers: The Canadian Experience - STATISTICS CANADA

A Price Index for Security Services in France: A Test - INSEE, FRANCE

Price Indexes for Commercial Services: The French Experience - INSEE, FRANCE

Price Indices for Road Haulage: Summary of a Report on a Pilot Survey in the Netherlands - CBS, NETHERLANDS

Measuring Banking Output: Integrating Production and Hedonic Approaches - BEA, U.S.A.

The Imputed Output of Banks - CSO, U.K.

Measuring the Output of Banks - STATISTICS CANADA

A Brief Explanation of the Development of Corporate Service Price Index (CSPI) in Japan - BANK OF JAPAN

Certain countries have reported their experience in developing a methodology for measuring the real output of *banking*, using a method of identifying banking services and deflating their output. Not as much success was achieved in creating deflators for inputs to arrive at a measure of real value added because of the difficulty of creating suitable deflators for the capital inputs of banks, and computers, in particular.

An interesting development is that of the compilation of a *Corporate Service Price Index (CSPI)*, which covers the prices of services transacted among business sectors, such as finance, insurance, transportation, and business services. It includes 74 services items, collected from 369 reporting enterprises, weighted by factors derived from input-output tables. As far as possible, actual contract prices are used, but list prices and unit labour costs must sometimes be used as proxies. This index has been found useful as a way of monitoring price changes of services. It moves very differently from the Wholesale Price Index.

Progress in developing independent output and input price indices for services has been slow, but the need to develop them remains imperative. The present practice of countries, which relies on indicators based on input prices, greatly minimizes productivity changes which, in the case of selected service industries, have been significant.

Developments in Other Areas

Employment

Most recently, there has been work designed to examine the structure of employment in the service sector in terms of age, sex, occupation, wages and other remuneration and educational requirements. The work draws out the varied nature of services that are grouped within what, until very recently, has been looked upon as 'the Service Sector'. There are service industries - mainly those that produce business services which rely on and sell the skills of highly trained labour, whose educational levels and average remuneration are very high as compared to those service industries engaged in the production of personal services, which also require particular skills but whose remuneration is much lower. Moreover, there are those service producers that are engaged in the distribution of goods - transportation and trade - which employ large numbers of low skilled persons, often on a part time basis, whose average remuneration is even lower.

R&D and Innovation

The model survey carries a module to collect information about R&D expenditures but, more recently, it has become apparent that it should also include a module dealing with industrial innovation.

Tourism

The Group intends to focus on studies of cross-cutting sectors, such as the tourism-related industries.

Business Behaviour

It is becoming increasingly more popular to examine the characteristics and practices of successful businesses and to use micro-data to examine the behaviour of national and transnational corporations.

Developing a Services Statistics Program

As countries try to develop their services statistics programs with limited resources, they face the need to set priorities. On closer examination, it becomes evident that not all service industries are equally important in an economy and that some play a much more important role as engines of growth than others. Computer services and telecommunications are service industries that are producers of advanced technology, which are crucial service inputs into all other industries. It is also clear that some industries are changing faster than others in terms of production functions and technology used, so it is necessary to survey them more frequently than others that are changing more slowly. A useful contribution to the issue of planning a services statistics program, in the form of a paper entitled "A Strategy for the Development of Services Statistics", was presented to the eighth meeting of the Voorburg Group. It examined the issue of which industries should be given high priority. It also examined which variables need to be collected and the frequency with which service industries, and particular variables relating to them, need to be surveyed.

Conclusion

The Voorburg Group's success to date is entirely due to the enthusiasm and motivation of its key members. Their eager contributions to the Group's discussions has crystallised in one requirement: each participant *must* publish a substantive paper regarded as a contribution to the collective knowledge of how activity in the services sector should be measured. The Group has not departed from this rule and is proud of its publication record to date. The main documents which are discussed at the Group's meetings are published by the host country of each annual meeting and made available to anybody wishing to see them.

An inventory of papers presented to meetings of the Voorburg Group and copies of the papers can be obtained from:

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