REPORT
OF THE SIXTH MEETING OF THE VOORBURG GROUP ON SERVICE STATISTICS
Helsinki, 7-11 October 1991

SESSION 1 - Monday, 7 October 1991

1. Opening of the meeting

The sixth meeting of the Voorburg Group on Service Statistics was held in Helsinki, Finland, from 7 October 1991 to 11 October 1991. Mr Tapio Leppo chaired the meeting.

The meeting was opened by Mr Hugues Picard (France), who chaired the fifth meeting of the Group in Paris in 1990. The participants were welcomed by Dr Niitamo, Director General of Statistics Finland. Dr Niitamo's speech is attached as Annex I.

2. Election of the officers

The session introducers were nominated vice chairmen and acted as the effective chairmen of their sessions. Ms Ann Chadeau (OECD) and Mr Bill Pattinson (Australia) kindly agreed to be rapporteurs.

3. Adoption of the agenda

The chairman reviewed the agenda, which was adopted without changes. The agenda is attached as Annex II. The documents discussed during the meeting are listed in Annex III. In the following, numbers of papers refer to the attached list of documents.

A list of the participants is attached as Annex IV.

The use of the CPC and other classification issues

Introducer: Shaila Nijhowne (Canada)
Leading discussant: Michael Beekman (Netherlands)

Papers:

Presentation

The paper (28) presented by Ms Nijhowne reports on Statistics Canada's experience in implementing the CPC categories for engineering services and assesses the feasibility of collecting data for the CPC classes. The Canadian experience suggests that, except for two categories, the CPC appropriately classifies engineering services and should therefore stand. According to the Canadian study, the service of 'project management' is not explicitly recognized in the CPC and the 5-digit break-down of 'integrated engineering services for turnkey projects' suggested in the CPC, seems not meaningful.

The survey by Statistics Canada collects commodity type data by asking for separate estimates of fees earned by type of service rendered and by field of specialization in which services are offered. In Statistics Canada's experience, the pricing of engineering services varies by type of project and by type of service offered.

Mr Beekman introduced the remaining five papers of the session. He first reviewed the history of drafting the ISIC Rev. 3 and the CPC and explained the classification work done within Eurostat. The main problem regarding the services part in product classifications seems to be the lack of experience in applying these classifications. Therefore, country experiences are extremely valuable for finalizing the classifications.

In addition to the Canadian (28) and the Finnish papers (18), the papers 4, 29, 11 and 22 also discuss the CPC and country experiences. Mr Beekman drew attention to those elements which affect the disaggregation of the CPC as applied in questionnaires. He argued that there is no need to be afraid of directing detailed questionnaires to service enterprises. On the contrary, statisticians should train enterprises to give reliable answers on the questionnaires. Another dimension concerning the disaggregation of the services is that, with the help of the classification used, one could find out both the coverage ratio and the specialization ratio of the industries concerned.

The Eurostat paper (21) presents two interrelated documents on the classifications of services. The first describes Eurostat's work on the creation of a data base on service classifications. The classifications contained in the data base follow five different approaches: product, activity, function, outlay and transactions. The main idea is to try to link all the classifications to the detailed items in the CPC in order to increase comprehensiveness and improve consistency.

The second part of the Eurostat paper (21), a study compiled by Professor Marco Martini, discusses the basic problems of service classifications. The study focuses mainly on business service classifications using the following five criteria for the identification of services: the type of client for whom the action is intended, the function or need which this meets, the way in which the producer interacts with the user, the means used for the action and the time period needed for the action. Mr Beekman remarked that there had long been a need for this kind of theoretical study and that many of the paper's conclusions seemed useful. The study confirms the thought that the structure of the CPC should be hierarchical.

Ms Chadeau's paper (35) presents a tentative comparison between the ISIC Rev. 3 and the classifications of service industries in the OECD countries. The paper shows the extent to which the ISIC is implemented by using the data currently available in the National Accounts publications of the member countries. The national classifications referred to are classifications which are used for breaking down Gross Domestic Product by kind of service activity.

The work done by the OECD was considered very important for improving the international comparability of service data.

Mr Veil contributed to the meeting a revised version of his paper on "Defining services: An enumerative approach" (25). Given the great conceptual difficulties in arriving at a single overall definition of services, and given the various analytical requirements, this note proposes a multiple enumerative definition of service. The proposed set of definitions are formulated in terms of the ISIC Rev. 3 and the provisional CPC. Mr Beekman's main question about this and Ms Chadeau's paper concerned the updating of this information.

Mr Veil's second paper (24) suggests the elaboration of a Voorburg Group glossary of service terms, the purpose of which would be to present definitions of all service terms. The glossary would group the existing definitions as well as provide standard definitions of terms for which no official definitions are available so far. This proposal provoked mixed feelings in Mr Beekman. If service items with respective definitions are to be included in the CPC, there will be no specific need for a service glossary. However, this kind of work would be highly suitable for international organizations.

Discussion and conclusions

During the subsequent discussion, Mr Lancetti (Eurostat) gave more information on the data base on service classifications and presented the basic ideas behind the Eurostat classification by function. Some participants

remarked that this new classification was closely related to the UN COIP, which covers all industries and thus goes beyond the Group's main interest.

It was agreed that one of the chief objectives of the Voorburg Group was to consider the draft CPC classification, to see how it could serve the linking of service classifications and to gain practical experience with it in order to suggest modifications to it in light of this experience. This should continue to be the case at future Voorburg Group meetings. Even though the CPC is due for revision and final acceptance in 1993, it is likely that this will be postponed for two or four years. It was the view of the Group that some experience will have been accumulated by then, but hardly enough to have fully assessed the complete services part of the CPC.

As indicated by Mr Beekman, several countries have carried out studies on the implementation of the CPC or are planning to do so. The Group thought that there should be a mechanism set up which would allow participating countries to advise other members of their forward work plans. This would maximize benefits for all member countries.

It was thought that the optimum way to amend the CPC at this stage would be to build on country experiences. Theoretical research exemplified by the "Martini approach" and aimed at setting up relevant criteria for classification purposes should be encouraged to complement these experiences.

In response to some questions presented in the Eurostat paper (21), Mr Ryten remarked that it would be very useful to have all the remarks, comments and proposals individual countries have made on the CPC gathered in one place. This would help in reaching an agreement on the proposals made and would benefit further work in this field. It was agreed that the most appropriate office to do so would be the UNSO.

Regarding the question of adding information to the Eurostat data base on classifications and their interactions, it was considered that this should be encouraged. As there was no agreement on a working model, it was suggested that bilateral contact be made between Eurostat and the relevant countries.

Regarding the enumerative approach to defining the services sector, it was agreed that member countries should confirm their definitions with Mr Veil in writing as soon as possible.

The meeting did not agree to accept the proposal by Mr. Veil to establish a "Voorburg Group glossary of terms". This was partly due to the fear that a glossary might be understood as a step towards the development of a set of standards, something for which the Voorburg Group did not have a charter.

There was an alternative proposal concerning the need to know what countries mean by similar terms but it was not generally accepted, although it would help to assess differences in country terminology in various papers and publications.

Individual countries were encouraged to respond to the Eurostat proposal concerning their multilingual data base on service industry statistics terms.

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Prices

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Leading

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Prices and quantities in services - general framework

Introducer: Siegfried Guckes (Germany)
Leading discussant: Hugues Picard (France)

Papers:
17. S. Guckes (Germany): Measurement of tariff bound prices for services
2. H. Picard (France): Calculating service price indexes? It is possible!
31. A. Meguerditchian (Canada): Comments on 'Volume measures for services and service industries. Draft international guidelines. Erling J. Flottum, Central Bureau of Statistics, Norway'
26. C. McSween (UNSO): Volume measures in ISIC 8 and 9 service industries: Country practices as a basis for international guidelines
13. O. Crocicchi (Eurostat): Annotated outline of a methodological manual for price and volume statistics in services
41 a. and b. OECD: Questionnaire on the measurement of value added at constant prices in service activities/industries

Presentation

Mr Guckes opened the session by characterizing the five contributed papers. Two of the papers, 17 and 2, only discussed the problems of price comparison, while the others also dealt with the quantity side of the problem.

According to the leading paper (17), prices in some important service industries are part of tariff systems, systems in which several price determining criteria may be applied. In such cases, price changes often occur in the form of tariff alterations. In some other cases the tariff system as a whole is changing, causing substantial difficulties for the measurement of the service price concerned. Such cases are sometimes treated as interruptions in price series, which could be dealt with by using more chaining.

The introducer drew attention to cases in which price changes had not been taken into account because they only resulted from a new tariff system which, however, was erroneously thought not to be applicable to the index base year. Clarification of problems like these might help to improve the measurement of prices and quantities in services.

Mr Picard first introduced his own paper (2) on the problems of calculating service price indices. He pointed out that these indices have in general to be consistent with the national accounting framework. But, due to certain difficulties, there are cases for which this constraint should be waived. He stressed the importance of the quality factor in defining the price of a service.

The quality of a service can only be measured a posteriori, after the service has been performed. The "notoriety" of the performer has to be substituted for "quality" when prices are collected for services not yet provided. To characterize possible improvements, other specific concepts must also be used, such as basic training, experience acquired over time, etc. Of course, the importance of the various concepts and the differences in comparison with the procedures applied for goods vary according to the type of service.

To make it easier to understand the differences between the quantity and the quality of the service and to grasp the distinction to be made between the activity, the product and the result, two dimensions should be considered:

1. Tangibility, which goes from the most tangible (a good) to the less tangible (advice given by one unique person)
2. The degree of engagement of the producer, which goes from an engagement limited to means to an engagement at the level of results.

Two papers dealt with international guidelines and country practices. The paper of Statistics Canada (31) provides a summary of the answers they received. There is a general support for Mr Flottum's paper as a good starting point for the development of international guidelines. Technical comments of both general and specific nature made by members are summarized in the paper. The paper includes also original submissions by members.

Mr McSween's (UNSO) paper (26) summarized the country descriptions of price indices and volume measures used in value added measurements at constant prices for financial and insurance services, business services, education services, health services and public administration. In practice, very few countries have the basic data to implement the double deflation method. The most common approximation is the use of a general price index or input indices to deflate value added. UNSO hopes to draw on national experiences as well as collaborative research efforts among the Voorburg Group members in respect of constant price measurement in these complex areas.

According to the paper by Mr Crocicchi (13), Eurostat would like to catalyze and promote efforts to develop a methodological manual which would supply a conceptual reference framework for price and volume statistics in services, as well as establishing guidelines for promoting, improving and harmonizing statistics in this domain.

Discussion and conclusions

The leading discussant, Mr Picard, summarized the papers by concluding that everybody is in favour of double deflation, but it cannot generally be applied because there is a lack of good price indices or there are no price indices at all. So the primary task in future work is to concentrate on developing price indices.

Mr Flottum's paper and the comments on it were considered extremely valuable. Clarification of country practices, as exemplified by the OECD questionnaire (41 a and b) distributed at the meeting, will further international comparability.

Mr Guckes emphasized that a little more effort should be devoted to the development and use of price indices allowing indirect measurement of the volume of service industries. The price indices approach is certainly preferable to direct measurement of the volume, especially in a situation where the price differentiation of a service at a certain time and between the same contractors is very complex.

A number of countries agreed, stating that they had a preference for the derivation of constant price measurements by deflation techniques rather than quantity indicators. For this reason, many re-emphasized the importance of developing price indices.

The suggestion was made that some flexibility should be allowed in implementing measurement methods by distinguishing between services for which price measures were feasible and those for which they were not. For the latter, the standing recommendation was to resort to volume measures using proxy indicators.

Of the general deflation methods, double deflation was considered the best option in theory. However, it needs to be recognized that for double deflation to work well, there is an additional need for intermediate input data. These data are often not available.

As regards the formation of price indices, it was recognized that the main task was to measure changes in the prices of services marketed on an ongoing basis. However, it was also considered important to allow for new services, or for services which had previously been available free of charge but for which charges were now levied.

A suggestion was made that price indices should first be constructed independently of National Accounts and then modified to meet National Accounts requirements where necessary.

Members of the Voorburg Group could contribute to statistical development by
> (1) responding to the OECD questionnaire on methodologies
>   employed in member countries and by
> (2) working to improve price indices, particularly in the area of
>   financial and business services.

Participants were reminded that the issue of measuring the volume component of service output should not be restricted to market services but should encompass non-market services (government services) as well.

There was agreement that the project on the Methodological Manual for Price and Volume Statistics on Services presented by Eurostat was a good starting point, providing a structure for some possible output of the Voorburg Group.

Prices and quantities in services - distributive trade

Introducer: Hugues Picard (France)
Leading discussant: Seppo Varjonen (Finland)

Papers:
12. F. Amand (France): Price indexes for commercial services. The French experience
14. J. Albert (Eurostat): Statistical requirements for assessing volume and price changes for commercial services
39. S. Varjonen (Finland): Volume measures of railway transportation

Presentation

Mr Picard presented the leading paper (12), which was based on a study of the French Commission on Trade Services investigating whether inflation was promoted by shopkeepers or by producers.

Traditionally the volume of the trade margin of the good is said to vary in the same way as the volume of the sales of the good. The volume of commercial service (the margin) for unit the good is assumed to be constant over time. This is true only for the given good and the given form of selling the good. The unit of the good can be defined, but the unit of commercial service has no meaning or cannot be defined. The calculation of the margin also depends on the refinement of the classification, especially in aggregating prices and volumes.

Under the assumption that, at the detailed level of the classification of trade activities, the change in the volume of trade services provided is equal to the change in the volume of sales, it is possible to derive a trader's service price index at the level under consideration. The assumption seems to be quite correct for successive years.

General trade service price indexes are obtained using the weighted average of detailed commercial margins. From these general price indexes, one can derive general volume indexes for internal trade services.

Mr Varjonen presented the remaining two papers. The aim of the Eurostat document by Mr Albert (14) is to define the conditions that should be met in order to obtain comparable measures in a number of countries. Reference is made to the "Trade" chapter in Eurostat's methodological manual on service statistics, which should include calculation of the value, volume and price components of trade services provided by businesses whose main activity is trade.

The Finnish paper (39) deals with alternative methods of measuring the volume of railway transportation, with particular reference to the suitability of tonne-kilometers as an indicator of the volume of freight transportation. If the average distance of transportation changes, the use of tonne-kilometers as a volume indicator is not to be recommended. More correct results can be obtained by weighting together the series of tonnes and tonne-kilometers.

Discussion and conclusions

It was agreed that double deflation was difficult to use for calculating the volume of total output of the distributive trade services. This is because there are no wholesale price indices which could be applied to deliveries of goods for resale without significant errors of measurement. Therefore, it was suggested that trade margins be deflated by price indices composed of price indices of turnover and changes in margin ratios.

Mr Albert described in detail the most important factors for assessing volume and price changes in commercial services. These factors are (1) the specification of classifications, (2) the relevant variables and (3) the consistency of time series.

Mr Beekman referred to the classifications and pointed out that the ISIC should be developed so as to pay more attention to the way goods are sold than to which goods are sold.

The Group agreed that both NACE and ISIC are inadequately developed as regards the services sector. In general, the distributive trade area is described in terms of goods traded rather than services provided. This should be corrected in future revisions of ISIC and NACE.

It was agreed that data should be cross-classified by CPC commodities and by types of trade outlet. This would come closer to statistical requirements.

It was considered that the classification of the consumer price index should follow the product classification if it was to be of use for the calculation of turnover in constant prices as a measure of the volume of activity.

SESSION 4 - Tuesday, 8 October 1991

Prices and quantities in services - business and insurance services

Introducer: Albert Meguerditchian (Canada)
Leading discussant: Hugues Picard (France)

Papers:
27. R. Lowe (Canada): Pricing services of consulting engineers
3. H. Picard (France): Towards time-to-time price indexes for business services
6. G. Isacsson (Sweden): Price index computation for (business) services
15. J. Walton: (Eurostat): Price and volume statistics: Insurance and pension funding
37. T. Rothovius and S. Varjonen (Finland): Volume measures for insurance and pension funding

Presentation

The introducer, Mr Meguerditchian, presented the leading paper (27) on the pricing of the services of consulting engineers. The approach is to use model pricing based on a contract, asking firms to select one or more representative contracts. Most contracts involved a variety of services corresponding to the

CPC classification, along with the new category of project management currently not included in the CPC.

There are three types of pricing method typical of the industry:
1) fixed price contract
2) cost-plus contract, in which multipliers are used to adjust direct costs to take into account overheads and associated costs and market conditions, and
3) percentage of the construction cost contract used mostly in buildings.

Co-operation with firms was generally very good, because they were already familiar with the output survey. The support of the professional association was of great help. Respondents were visited twice during the pilot study, with interviews lasting several hours.

According to the Canadian experience, so far the model pricing technique is promising and could be applied to the services of consulting engineers. Prices could be estimated at the most detailed level of the CPC on the basis of the information provided by the firms. However, very little is yet known about the behaviour of price movements by type of service. Apart from remedying gaps in terms of the representation of smaller companies and of building projects, future work will consist in repricing the models and analyzing price movements by type of service and fields of specialization. These will help in a better assessment of model pricing.

Mr Picard presented the remaining papers. The French paper (3) dealt with the experience of establishing quarterly price indices for security services in connexion with the relevant industry associations. The conclusions are similar to those obtained by Statistics Canada. For the time being, it looks as if services could be included in the general framework for price collection. France will soon launch a survey on the market research and poll survey "industries".

The paper by Mr Isacsson (6) discussed the outcome of Swedish attempts to measure prices for several business services. Mr Picard had some reservations regarding the paper's proposal to use list prices. List prices are often available for some market services, but they may represent only a small proportion of the profession and may in some cases contain products that are not even available.

Two complementary papers, 15 and 37, dealt with insurance services. The main problems with this topic have to do with the questions: What is the output of insurance and what are the prices of insurance? In Mr Walton's paper the output of insurance includes reinsurance, but in Mr Varjonen's paper reinsurance is included in the intermediate input. Both papers point out that even if one uses deflators, one has to have very detailed classifiations of insurance services.

Mr Walton's paper (15) discusses five approaches to measuring changes in the volume of insurance activity and describes the classification and information requirements relevant to this measurement. The methods described are:
1) double deflation of gross output and of intermediate inputs;

2) single deflation of gross output;
3) single deflation of gross output elements;
4) revaluation of factor incomes;
5) use of quantity indicators, such as the number of policies and the number of employees.

The author draws no final conclusions but states that there are considerable difficulties in applying the first three methods for insurance.

The Finnish paper (37) deals with volume measures based on the type of insurance. The measurement can be based either on deflation or on the use of a quantity indicator. Both approaches were tested in the Finnish experiment. A characteristic of insurance production is that fluctuations are very great.

The paper also deals with the use of the Laspeyres vs. the chain index in volume measurements. The change of the fixed base year did not have much impact on results, but the same was not true of the chaining method. In addition, growth rates obtained by the chaining method were very low, resulting in a negative average growth for value added.

Discussion and conclusions

Both the Canadian experience in pricing services of consulting engineers and the French experience in establishing price indices for various business services suggest that it is possible to apply model pricing techniques and achieve worthwhile results. To do so, however, requires close co-operation with the relevant industrial and trade associations and their members.

It was also recognized that the model price technique can only be validated after pricing identical contracts in two successive time periods. Updates on the results of further work done with the pilot surveys would be useful.

Regarding the calculation of the volume of output of insurance services, the Group reached the conclusion that derivation of constant price output was extremely difficult in the insurance industry. The national accounts definition of output (broadly, premiums $\pm$ technical reserves - claims + income from investments) did not lend itself to double deflation. Hence statisticians would need to look at alternatives such as direct collection of quantity measures. However, no one has so far come up with potentially good alternatives.

When constructing price indices in insurance and in other areas, statisticians should obtain input price data at a more detailed level than that described in the CPC.

In view of all the unresolved issues in this field, members of the Voorburg Group were encouraged to continue their efforts to arrive at better solutions than those currently available. The issue should be discussed at a future Voorburg Group meeting.

Prices and quantities in services - government services

Introducer: Adriaan Bloem (Netherlands)
Leading Discussant: Juri Köll (Sweden)

Papers:
1. B. Kazemier (Netherlands): Volume measurement of government output in the Netherlands; some alternatives
5. Juri Köll (Sweden): Prices and quantities in productivity measurements for the government sector in Sweden

Presentation

Mr Bloem opened the session and introduced Mr Kazemier's paper. The two papers of the session deal with the measurement of the volume of government production. The problem with government production is that it is not brought to the market, there is no price for it and it is difficult to identify the product.

Mr Kazemier experimented with three different methods to estimate changes in the labour productivity of government, i.e.
> 1) the output indicator method
> 2) the structural determinants method
> 3) the deflator method

In the output indicator method, government was first split up into several subsectors and then indicators of output were sought for each subsector. The results proved to be debatable. The indicators used are often incomplete and they do not always measure government production.

In the structural determinants method, the proxy for productivity changes is based on the production function calculated for industries outside government. The method can only be defended if the parameters of the production function estimated are sector-independent. Because of the shortness of time series, this could not be determined. Thus the method did not lead to fully reliable estimates of the labour productivity of government.

The deflator method is based on the assumption that government wage rates reflect changes in productivity. Thus wage rate changes can be split into two components: compensation for inflation and compensation for productivity changes. In Mr Kazemier's paper, the index of basic wage rates according to collective agreements was used as a proxy for inflation. A problem is that these wage rates probably also compensate for productivity changes. Thus, volume estimates would be under-estimated. However, it can be argued that it is not necessarily sure that inflation is fully compensated for.

All the methods led to similar results. In the last two decades, the average annual increase in government labour productivity was about 0.7 per cent per full-time worker equivalent. The implementation of any of these methods would have led to 0.1 percentage points higher estimates of economic growth in the Netherlands.

Mr Köll reported that Statistics Sweden has tested a method which can be described as an output valuation or output unit method. According to this method, the change in the real costs for administratively defined products was measured for two successive periods. The method leaves out all non-recurrent activities, e.g. project work. The weakness of the method is that it is difficult to get an objective valuation of changes in production volume and even harder of changes in production quality.

On the basis of the experiences gained, Sweden will next be testing a procedure in which productivity measurements will be made on a sample of products, at the specific producer units for those products. The sample will include products with no quality changes or with measurable (small) quality changes. Products with significant quality changes will be replaced by similar products without significant quality changes. The products must be homogeneous and turned out by several producers. Costs at fixed prices will be collected for the production of one unit for the products chosen.

A shortcoming of the method is that all non-recurrent production will be excluded from productivity measurements. On the basis of studies made in Statistics Sweden, about 35 per cent of production was of the kind for which compatible figures could not be derived for two years.

Discussion and conclusions

Several participants pointed out that all methods described will give acceptable results for government activities resulting in quantifiable output, but that problems will arise with general administration whose output is abstract. In particular, none of the methods seem to provide a satisfactory solution for the measurement of short-run movements.

The issue of aggregation was also raised. After estimates are made for a range of services, what assumptions are made for the other production, especially when the range of government production changes? It was pointed out that in price statistics the consumption of the previous year can be used as the sampling frame and that theoretically the situation is the same in the case of government.

Attention was drawn to international comparisons where difficulties are even greater because of the differences in institutional structure between different countries. Not all governments provide the same services. It was emphasized that irrespective of whatever method the member countries use, it is important to remember the assumptions being applied, particularly when comparing the performances of different countries.

There was some debate about whether Mr. Kendrick's assumption that "labour income and wages in the service sector tend to follow labour productivity" holds true and whether this might also be true of government.

When estimating the growth in government production/value added, many countries make the assumption that there is zero productivity growth in the government sector. Though probably invalid, this assumption is widely used because of the absence of any defensible alternative.

It was agreed that it is worthwhile continuing the research being undertaken in the Netherlands and in Sweden. Other member countries were also encouraged to undertake more work in this area. A general method for finding some "sample" products common to successive time periods and which could be used as an approximation seemed to hold out a promise of success. However, there are probably many government services for which it would not be possible to find a suitable product (e.g. general administration, defence).

The idea of putting some work into developing a link between COFOG, ISIC and CPC may be a useful way of extending research in this field.

SESSION 6 - Wednesday, 9 October and Thursday 10 October 1991

Statistical surveys of service activities

Introducer: Shaila Nijowne (Canada)
Leading discussant: Roger Norton (United Kingdom)

Papers:
29. C. Gaston and D. April (Canada): The model survey of computer services. Statistics Canada's experience
11. P. Trogan (France): Computer services in France. Results for 1989 presented within the framework of the standard survey of Statistics Canada
22. Department of Statistics (New Zealand): Development of services statistics. Report on the pilot test of the computer services industry survey
32. R. Norton (UK): Statistical survey for selected non-financial service trades
 4. B. Olsson (Sweden): Swedish experiences of statistical surveys on the service sector
16. E.A. Fisher (Eurostat): Development of methodological guidelines for conducting pilot surveys on the business services sector
34. A. Takami (Japan): Outline of the 1989 survey on service industries
38. W. Pattinson (Australia): Development of service industry statistics in Australia

Presentation of the model surveys of computer services

Ms. Nijhowne presented an overview of the three papers on the implementation of the model survey of computer services. She considered the papers such a rich source of information on CPC categories, especially on their applicability to information collection, that it would be useful to integrate all the information into one document.

The first issues dealt with were the units used and the size of the sample. New Zealand (22) described their survey as a pilot survey to test the feasibility of undertaking this kind of survey. On the basis of replies from 131 respondents, their conclusion is that they will apply the model survey with minor amendments. Canada (29) described their experiences in terms of responses from 598 large businesses within the industry. France (11) described their experiences and provided data on the basis of a sample of 5,000 enterprises.

There are 16,800 enterprises operating in the field in France. The equivalent for Canada in 1988 was 9,380.

Two important questions arise about coverage. How does one determine the universe of businesses covered by the different modules of the survey? Does complete coverage require the coverage of both the principal and the secondary providers of the service? No country has completely covered secondary provision of these services and been able actually to quantify the extent to which it has not been covered.

There are difficulties in drawing boundaries between some computer services, especially computer processing and database services, and some of the other industries. In order to avoid misunderstanding, Canada has attempted to develop certain criteria and definitions for identifying these services.

As to the specifics of country experiences, all three countries had been able to cover Module 1 Revenues from the sale of computer services. However, difficulties arose with some detailed items. New Zealand had treated systems integrators as bundled services, whereas France and Canada had collected data with a detailed breakdown. It will have to be decided in time whether it is necessary to create a category for bundled services when a breakdown cannot be given.

As for computer repair and maintenance, no country is able to identify a sufficient number of firms specialized in this field. In Canada these services tend to be provided mainly by wholesalers of computer equipment; in France the activity is largely confined to manufacturing, with suppliers of hardware providing repair and maintenance service as well.

It also emerged that subcontracting is an important issue in the computer services sector. Countries have treated it in different ways. Some convention needs to be adopted.

Canada's main problem with the question of exports was to make it clear to respondents that exports do not include the sales of subsidiaries operating in other countries. The problem can be avoided by adding a question asking the company to report its foreign sales and those of its subsidiaries separately.

The question of imports also caused problems, because the majority of firms engaged in importing computer services are not within the computer service industry at all. There is confusion about packaged software, which many countries include in the categories of merchandise trade within the Harmonized System.

As to employment data, the countries were able to collect data on actual employment, on full-time and part-time employees. Canada did not ask for employment data by sex or occupational class.

As for the question of capital expenditure, neither France nor Canada has yet been able to isolate capital expenditure or the capital stock.

It was recognized that expenditure on software development was an R&D expenditure. Canada and New Zealand are going to collect this information

using their overall R&D questionnaire sent to all businesses. It appears to be a business practice to capitalize some R&D expenditure.

Discussion and conclusions

Ms Olsson reported on experiences of the computer services survey being carried out in Sweden. Although the final results were not yet available, the experience from the modules implemented have been good.

Mr Lancetti informed the Group that Eurostat has agreed to run a pilot survey covering 11 sectors, one of them computer and computer related activities, and that Eurostat is preparing a proposal for the setting up of a task force to coordinate the development of computer services surveys within the general realm of the EEC. Eurostat would like to work with the Voorburg Group if this task force is set up. The precise method of cooperation was not discussed. It was suggested that the integrated paper might be an input for the task force.

There was also a suggestion that a detailed compilation and analysis of the statistical results of these surveys across all countries should be presented to the next Voorburg Group meeting.

It was agreed that there is a great deal of information available in country papers presented to the Voorburg Group concerning the model survey on computer services, suggesting the need for a volunteer to integrate all the information into one document.

Mr Pattinson volunteered to bring together any results that the participants might put at his disposal. His offer was accepted. It was suggested that the country contributions should be sent to him ahead of time so that he could contribute the summary for the next meeting.

Mr Beekman remarked that the large variations in the numbers of units are due to the fact that the definitions of the statistical units still vary a great deal. Also, when interpreting the results, it must also be borne in mind that development in the services sector has been so fast that some industries may have declined or almost disappeared since 1986, when the CPC was first developed.

Mr Ryten stated that on the basis of the experience gained the Group can now better determine how to launch similar exercises for other industries. In areas where technical changes are rapid, the Group is going to find all kinds of inadequacies and should use them to prepare a brief for the forthcoming revisions of the commodity and industry classifications.

Further, he suggested that the Group should also engage in an exercise in comparing the survey results, making sure that the numbers compared, particularly ratios, have a common meaning. One country should take the lead and engage in analytical inter-country comparison. The figures compared need not necessarily originate from the same survey. The model survey can be used as a framework for bringing related figures together.

The Group agreed that it was extremely gratifying to see the way in which the model survey of computer services has been adopted in member countries and

how well it has stood up in practice. This led to the thought of extending this practice to surveys of other parts of the service sector.

The experience gained to date needs to be given some further consideration by members, particularly issues which may have wider ramifications for the collection of data from services and other sectors.

The Group agreed that there was no question of criticizing the way in which the CPC or the ISIC are designed at present; rather, the aim was to contribute to the discussion of the appropriateness of the classes. Relevant information needs to be consolidated and passed on to authorities responsible for the development of the ISIC, CPC and related classifications.

Presentation of other surveys on services

Mr Norton presented the rest of the papers. The Eurostat paper (16) describes a pilot survey in the business services sector. It is one of several pilot surveys seen necessary for the development of methodology, especially in countries that previously have not conducted enterprise-based surveys in these areas. The paper presents a model questionnaire to be used as a guide by those taking part.

Two issues were raised for discussion:
- the requirement that the model questionnaire should provide information on the demand for business services by client, by type of client and by size of client enterprise;
- whether in the search for harmonization it is necessary, or even desirable, to try to standardize sampling procedures.

Improvements and extensions to services sector statistics in the UK from the mid-eighties were first primarily concerned with annual data and aimed at improving the national accounts. The annual inquiries collect very little commodity data. In recent work, all emphasis has been on developing better short-term statistics. The paper (32) describes the setting up of quarterly turnover inquiries to non-financial service trades and some associated prices inquiries. The inquiries are aimed at providing improved measures of activities for the benefit of the UK's quarterly output approach to the measurement of gross domestic product. The most important considerations determining the shape of the quarterly turnover inquiries were simplicity, because of the concern about the form-filling burden, and speed.

The Swedish (4) paper is a detailed account of annual and periodical inquiries to the service sector in Sweden. The paper is concerned about response problems, especially in retailing where small firms predominate.

The paper (34) from Japan presents the 1989 survey on service industries. The sample size was some 500,000 establishments. All establishments with at least 10 employees were covered (enumerated). From among establishments with less than 10 employees, an area sample was drawn.

Mr Pattinson's paper (38) describes recent work in implementing the revised economic statistics strategy for service industries. The strategy calls for a change in business register coverage; a change in the statistical unit model;

the implementation of upgraded standard industrial and commodity classifications; a set of rotating industry collections in which the structure and performance of particular industries are measured; and an annual "broad brush" picture of the whole economy to be measured via an economic survey.

Discussion and conclusions

The idea of setting up a general framework for sampling schemes and strategies was discussed. It was rejected on the grounds that the Voorburg Group may not be the most appropriate forum. In addition, a different range of skills and knowledge would be required.

There was some discussion about the increased reporting burden in the U.K. statistical system following the expansion of their sub-annual inquiries. Mr Norton pointed out that there had not been any significant backlash from the U.K. business community. Response had been somewhat better than expected.

Mr Picard pointed out that for certain rapidly evolving service sectors, such as computer services, telecommunications and audiovisuals, annual surveys, at least simple ones, are a necessity in order to guarantee comparability over time.

In summary, country experiences suggested that service industry statistical programs were being developed in an environment in which the services being provided were changing. The contents of questionnaires were being tested and modified, hampering year-to-year comparison of detailed results.

In view of the user demand for frequent information, statistical programs should maintain a balance between collecting detailed structural information at longer intervals and gathering data on simpler indicators more frequently.

The Group noted with satisfaction that the tests have shown that one can ask as detailed data in the surveys of service industries as of manufacturing industries.

Use of administrative records in compiling service statistics

Introducer: Peter Boegh Nielsen (Denmark)
Leading discussant: Aarno Laihonen (Finland)

Papers

30. P. Boegh Nielsen and K.Stetkaer (Denmark): Use of administrative registers in the production of service statistics - The Danish case
10. P. Trogan (France): Statistical processing of administrative files, The French experience
9. A. Laihonen (Finland): Use of register-based employment statistics to provide data for service statistics
19. H. Hamilton, P. Hanczaryk, B. Greenberg, C. Konschnik (U.S.A): Census Bureau uses of administrative data for service statistics

Presentation

Mr Nielsen stated that discussion of register-based statistics has increased in the 1980s due to
1) the capability of EDP technology to handle larger and larger amounts of data in an easier and easier manner,
2) the policy of wanting to reduce the respondent burden on the firms,
3) the policy of avoiding duplication of data collection, and
4) the economic situation of the central statistical bureaus.

Register-based statistics can be characterized as being 1) broad, because they normally cover all the units of a population; 2) thin, because they normally contain only a few variables; 3) vulnerable, because their existence is not decided by the statistical office but by government or local administration, and 4) inexpensive, because the collection of data has already been done.

Contributions for the session were submitted by two large countries (the USA and France) and two small countries (Denmark and Finland).

Denmark has three basic registers: 1) a central population register, 2) an administrative register of buildings and dwellings, and 3) a business register, the most important register from the point of view of service statistics.

Statistical use of administrative registers offers both advantages and disadvantages. One of the problems in Denmark is that different administrative registers use different units. For example, there is a VAT unit and a tax unit which are not identical with each other or with the statistical unit. This problem will, however, be solved in that the new business register, which will be completed by the end of 1992, will have only two units, establishments and enterprises.

Another problem is the excess of units. The low threshold for VAT (10,000 Dkr) allows a large number of small units which are not enterprises to enter the register and thus register-based statistics.

Although the coverage of statistics on the service sector is not so good as that on traditional sectors, the problem in the Danish case will not be solved by

producing more statistics on the service sector but by improving the business register and the system of register-based statistics.

Mr. Laihonen reviewed the remaining papers. In France administrative files are used in three ways: 1) direct processing; 2) processing by matching with statistical sources and 3) processing by using a supplementary ad hoc survey, i.e. supplementing data from administrative sources by survey data on small enterprises which are not covered by the administrative sources.

Apart from reducing the respondent burden, several technical factors favour the use of administrative sources, such as the use of the identification code in all administrative files, the standardization of enterprise accounts and the development of the use of computers.

As for the weaknesses of the use of administrative files, the coverage of administrative sources is often limited, and the concepts and classifications applied in administrative systems are not compatible with statistical requirements.

The U.S. Census Bureau is engaged in the largest expansion of coverage for the service industries in the past 50 years. In particular, coverage will be extended into the areas of communication, transportation, finance, insurance and real estate. With the expansion, Census Bureau economic programs will be representing about 98 per cent of Gross National Product, up from 74 per cent currently. The entire expansion of coverage will take effect with the 1992 censuses.

The Bureau makes extensive use of administrative records in a wide range of programs. The records are key components of the economic censuses, especially for the retail and service industries. Administrative records are used to assemble mailing lists and to obtain industrial classifications for businesses included in economic censuses and related surveys. Information about small single-establishment employer firms with payrolls below specified cutoffs is obtained from administrative records as well as information and data values for nonemployers.

The paper emphasizes the need for close cooperation between the Census Bureau and the agency providing data. Quality assessment and quality control of administrative data are also of great importance.

The Finnish paper (9) deals with the new possibility of deriving labour input statistics for the service sector from the new system of register-based employment statistics. The system was established in 1987 to replace the heavy data collection on the economic activity of the population as part of the population censuses carried out every five years. The system uses taxation data and data from work pension systems in order to determine the employment status of the population of working age. Every employed person is connected to his or her workplace (establishment) and employer (enterprise or public sector organization). The data can be organized to allow compilation of statistics on the personnel of enterprises. The system allows a high level of coverage of enterprises in the service sector and makes it possible to compile statistics on the demographic and educational structure of the service sector labour force.

Administrative data can be used in a variety of ways for statistical purposes. They can be used as a source for compiling and updating business registers; as a direct source of data on statistical aggregates (e.g. turnover and employment data); as a source of benchmark estimates (for other collections or for national accounting purposes). Registers also furnish a sample frame for statistical purposes.

Administrative data also lend themselves to the setting up of business registers and their application for statistical collections. Participants spoke of the general problems they have experienced with this particular use, such as delays in receiving notifications of births and deaths, changes in statistical series as a result of complementary new register systems and general updating problems. The problem of firms splitting up into small units or changing ownership was also discussed.

The use of administrative data for compiling statistics is considered important in several countries because it reduces the respondent burden of enterprises in general and enables the coverage of small enterprises, which constitute a relatively large proportion of the service sector.

Participants agreed that administrative registers are the best way of obtaining data about non-employers, whose proportion is high in the service industries. This subject was considered a possible area for future work.

The different thresholds in the administrative data used in different countries may have an impact on international comparisons. A comparative study of regulations concerning VAT units would be of interest.

SESSION 8 • Friday, 11 October 1991

International trade in services

Introducer: Jack Bame (IMF)
Leading discussant: Erwin Veil (OECD)

Papers
7. International Monetary Fund: Draft classification of international transactions in services
36. OECD-EUROSTAT: Proposals for a joint OECD-EUROSTAT trade-in-services classification
20. W. Tislenkoff (GATT): International trade in services
8. M. Dunavölgyi (UNSO): Statistics on trade in services in Asia
33. Z.E. Kenessey (UNCTAD): Statistics on trade in services in Asia
23. F.W.H. Ho (Hong Kong): An account of statistics on trade in services compiled by Hong Kong

Presentation

Mr Bame introduced the draft Classification of International Transactions in Services that has been prepared in the context of the forthcoming fifth edition of the Balance of Payments Manual (BMB). The Draft Classification is the

result of a long process of close cooperation between national compilers, the OECD, Eurostat and the IMF and the SNA revision process.

Producing and drafting the manual has been a harmonization effort. There is a clear separation between income and services in the list of service components. This links closely with the SNA. Except for the traditional services of travel and transportation, other services were previously looked upon as a residual item grouped with labour income. This time around, there is a full chapter on these other services. Much work has gone into the harmonization of the list with the proposed Joint OECD-Eurostat Trade in Services Classification. The list is less detailed than that of the OECD and Eurostat. For the most part, the Draft Classification is compatible with the CPC at the three-digit level. The IMF is going to have a cross-classification table showing the links between the CPC and IMF classifications.

The IMF has also prepared a companion document, the Balance of Payments Compilation Guide, which is intended to provide practical advice, especially to countries with less developed statistical systems.

Mr Veil introduced the remaining five papers and pointed out that the IMF (7) and OECD-Eurostat (36) papers belong closely together in that they are both exclusively concerned with a future classification of trade in services. The essential thing is that while the IMF presents a universal classification, the OECD-Eurostat classification is limited to the OECD area, although there is a possibility of extending it to new members of the two organizations. For the moment, there are some differences and divergencies, but it is the intention on both sides to arrive at completely compatible solutions and to solve all the cases where there are still differences.

Two papers, by the UNSO (8) and Hong Kong (23), describe and assess the present status of trade in services statistics in Hong Kong and in five other Asian countries. Both of these documents were considered useful as a source of information on methods and definitions, on international comparability, degree of detail, timeliness, and other matters. They will serve as models for future work in this area. The UNSO paper compares practices and problems amongst a group of countries and could thus serve as a model for future work on other countries, e.g. Latin American and African countries.

The UNCTAD paper by Mr Kenessey (33) builds on the UNSO paper which it reviews but goes beyond it by presenting quantitative evidence of the importance of service trade. This is done on the basis of a comparison between Hong Kong and the United States. In the paper the Group has a useful analysis of the available data on a comparative basis. The UNCTAD document also proposes some improvements in the field of statistics for the future, such as strict adherence to the IMF and UN standards, manageable detail in data collection, more frequent issuance of data, increased timeliness, more thorough exploration of administrative records, and expanded use of special surveys. These are very pertinent recommendations and should be taken into account whenever problems of standardization and harmonization of statistics on trade in services at the world level are addressed.

The GATT paper (20) presents an analysis of the present status in combination with future problems. On the one hand, it describes the status of

the GATT database and the GATT publications on trade in services. It then presents the GATT services classification list in the context of the Uruguay Round negotiations which specifies the future data needs. The GATT service classification list is much more disaggregated than the OECD-Eurostat classification, which already is considered by many people as being too detailed and going too far.

The GATT paper also addresses the problem of the price/volume split of current values. It sets out the available National Accounts deflators for exports and imports of services and arrives at the conclusion that these national measures not only vary a great deal from one country to the other but are really very unsatisfactory.

Discussion and conclusions

The Group noted with satisfaction that significant progress has been made towards a fairly complete harmonization of the classification of international trade in services as reflected in both the OECD-EUROSTAT classification and the IMF classification.

On the data collection front, several papers emphasized the importance of adhering to international standards. It is also important to pay attention to the cost-benefit factor in data collection procedures. This is particularly relevant for less developed countries.

Mr Taj pointed out that the UNCTAD paper was submitted for critical appraisal by the Group. In its efforts to promote the work in the field of trade in services, UNCTAD expects feedback concerning Mr Kenessey's approach and recommendations, the level of detail in data collection and the use of administrative records and special surveys.

The Group agreed that particular attention should be paid to the practical problems of less developed countries. In this respect some help might be available from the Balance of Payments Compilation Guide. It points out the relative benefits and costs of surveys as opposed to other data collection methods, guides countries as to what might be their initial emphasis, and so on. The IMF also gives courses in balance of payments methodology, especially for less developed countries.

As to data collection, Mr Ho pointed out that statistical resources are limited in developing countries. These countries cannot devote too much effort to following the very detailed classifications and the very many alternative classifications.

Attention was drawn to the work done in the UK Central Statistical Office providing information on the prices and volumes of trade in services.

The problem of prices and quantities in international trade in services and the inadequacy of the aggregate method of taking aggregate deflators constitute an issue of great importance for future work. The work of the UK and Australia could provide a basis for detailed deflation of constant dollar numbers in international trade in services. This seems to be the way to proceed.

It was emphasized that cooperation between the balance of payment statisticians and other statisticians is becoming more and more important because a number of administrative procedures to record data for the balance of payments are disappearing. To improve balance of payments statistics, surveys on services will be needed.

The issue of establishment trade was also raised. Mr Veil informed the Group that the OECD is aware of the importance of the problem and already has examples of solutions. In the United States the problems of establishment trade are linked with the problems of foreign direct investment. There was general interest in the matter and expectation that some progress will be made by the next meeting.

SESSION 9 - Friday, 11 October 1991

Future work of the Voorburg Group

1. Venue for the next meeting

On behalf of the U.S. Bureau of the Census, Mr Hamilton volunteered to host the next meeting of the Voorburg Group. The week of October 19, 1992, was proposed for the date and the city of Williamsburg for the place of the meeting. The invitation was accepted with great pleasure.

The participants were also informed of the meetings after Williamsburg. According to the initial indications, the 1993 meeting will take place in Oslo; the 1994 meeting in Canberra or somewhere else as suggested by the ABS; and the 1995 meeting, marking the tenth anniversary of the Group, in Voorburg.

2. Proposed agenda for the next meeting

Regarding discussion of the topics to be included on the agenda, it was agreed that
- three sessions should be devoted to model surveys for three major industies: insurance, audiovisual services, telecommunication services;
- one session on the computing industry taking advantage of Mr Pattinson's offer to integrate the results;
- one session on prices and quantities in services,
- one session on international trade in services: links with domestic production
- one session on the CPC
- one session jointly on country experiences in services not covered by other sessions and on host country experiences.

The Group agreed that the procedure that one country takes the lead and others assist will also be followed at the next meeting.

The following tentative agenda was agreed upon:

		Lead	Associates
1.	Opening of the Meeting		
2.	Election of the Officers		
3.	Adoption of the Agenda		
4.	Prices and Quantities in Services	NL	CAN, GER, FR, OECD, UNSO, UK, Eurostat, (FIN), (SWE), (IMF)
5.	International Trade in Services: Links with Domestic Production	CAN	OECD, UNCTAD/UNSO, Eurostat, IMF, GATT, (NL), (FR), (UK)
6.	Model Survey of Audiovisual Services	FR	FIN, SWE
7.	Model Survey of Telecommunications	FR	CAN, (NL), (SWE)
8.	Model Survey of Insurance Services	CAN	Eurostat, USA/BEA
9.	Model Survey of Computer Services	AUS	CAN, SWE, FR, NZ, (CZE)
10.	The CPC	NL	Eurostat, UNSO, CAN, Brazil
11.	Host Country Experiences	USA	
12.	Country Experiences on Pilot Surveys	DEN	Eurostat, GER
13.	Discussion of the Group's Future Work		
14.	Other Problems Raised by the Participants		
15.	Closing of the Meeting		

It was agreed that countries that volunteered to be the lead countries should contact the supporting countries at an early stage of preparations for the next meeting, informing them of the subject of the contribution, the timing of the preparation of papers, etc. in order that the organizers and the host country can make their arrangements for the meeting.

3. Response to the UN Statistical Commission request

It was agreed to react positively to the request that the Group should present a substantive paper for the coming UN Statistical Commission Meeting in 1993. However, it was considered too early to decide on the subject. Presumably it would deal with one of the new model surveys discussed at the next meeting.

4. Preparation of the final report

Ms Jeskanen-Sundström informed the Group of the procedures to be followed in the preparation of the final report. The report will be drawn up by Statistics Finland. It will contain summaries of the introductions and of the discussions. The conclusions will be based on the rapporteurs' reports. The report will be sent to the participants for comments.

The Group accepted the proposal according to which the selection of the papers to be published will be made by the Bureau on the basis of the following criteria: 1) the paper is written in English; 2) it is not published elsewhere and 3) it makes a substantial contribution to the work of the Group or to the improvement of service statistics.

Statistics Canada kindly offered help in editing the papers. A copy of the edited version will be sent to the author for approval before it is published.

5. Approval of the rapporteurs' report

The report prepared by the rapporteurs was considered valuable and it was approved with minor corrections and additions. The report will not be published as such but will be included in the final report.

6. Election of the Bureau members

Mr Ryten, Mr Beekman and Mr Picard were elected as members of the Bureau. Mrs Jeskanen-Sundström and Mr Hamilton will be ex officio members as organizers of the present and next meetings respectively.

Closing remarks

Mr Beekman thanked the Chairman, the Secretariat and Ms Jeskanen-Sundström for the excellent organization of the meeting.

Mr Leppo thanked the Vice Chairmen, the leading discussants, the rapporteurs and the participants for their contributions to the meeting. He had found the discussions and the papers extremely interesting and useful for the future work of the Group. He closed the meeting and wished all the participants a safe and pleasant trip back home.