

VOORBURG GROUP ON SERVICES STATISTICS

14th Meeting

Christchurch, 11-15 October 1999

Purchases of services by enterprises

Draft proposal for a model questionnaire

Session 6

Abstract

The paper presents a draft proposal for a model questionnaire on the purchases of services by enterprises. The paper defines 8 categories of types of services based on the CPA. The questionnaire contains both quantitative and qualitative information about the usage of services by enterprises. The paper includes the results of a testing of the questionnaire carried out by Statistics Sweden.

Gunnel Bengtsson (Statistics Sweden)
Peter Bøegh Nielsen (Statistics Denmark)

The views expressed in this document are those of the authors and do not engage the statistical institutes.

1. Introduction

Following the discussion of the last Voorburg Group meeting concerning demand for services, Eurostat decided to carry out a pilot survey on purchases of services by enterprises. The pilot action has to be seen in the framework of the Structural Business Statistics Regulation put into force beginning of 1997.¹ In this regulation the variable *13 11 0 total purchases of goods and services* is related to the topic of demand for services. But the Regulation has no requirement of a further disaggregation of this variable into a goods and services part, not to mention a further breakdown of the services into types of services. Thus the pilot survey is a test of the feasibility of a detailed breakdown of the purchases variable.

As the more detailed motivation for a demand side study, choice of product classification aggregation and existing statistics on purchases of services has been presented in the paper by P. Bøegh Nielsen and S. Rikama² this paper shall be seen as an extension of the previous paper presenting partly a questionnaire focused on quantitative information on purchases of services more than on the outsourcing process, partly presenting actual experiences of a pilot test of the draft questionnaire.

2. General design principles for the model

The main challenge in this exercise is to identify and describe the services products in such a manner that the proposed categories for data collection on the one hand can be understood by the respondents and on the other hand used by the statisticians.

2.1 Delineation of included type of services based on CPA

The production process consists of an array of manufacturing activities as well as of services that are used by the enterprises either directly in the *production process* or *other* (auxiliary) *functions* of the manufacturing enterprises. These services can typically be either provided *in-house* or *outsourced*. In order to pilot the area in a feasible way we have to limit our scope considerably and focus on some key areas.

For defining the types of services to be included in the draft questionnaire we have, defined a universe of services consumed by the businesses which we then have defined in terms of the Statistical Classification of Products by Activity in the European Community (hereafter called CPA). But in order to translate the language of the statisticians to the language of the businesses we have regrouped the CPA groups in line with the organisation of the different activities within the enterprises, see box 1³.

¹ Council Regulation No. 58/97

² P. Bøegh Nielsen and S. Rikama: How can we measure demand for services by businesses?, paper presented at the Voorburg Group meeting 1998 in Roma

³ The exact CPA groups are listed in annex 2

Box 1 Grouping of types of services

Production related services
Transport and distribution
ICT-services
Human resources related services
Financial related services
Administration
Marketing services
Auxiliary services

Altogether 3 levels of services used are identified in the questionnaire. Firstly, the total of services used by the businesses, secondly the 8 groups each including more than one CPA classes (4 digit) and thirdly the individual CPA class included in the groups. The model questionnaire is intended to be a flexible appliance implying the possibility of choosing between the different levels mentioned above. Furthermore, only selected groups or classes can be used if the need is to focus on the use of specific services as e.g. use of engineering services or building cleaning.

2.2 Structure of the questionnaire

The survey framework of the purchases for services by businesses is designed as a data model where the information is collected from *the user enterprises*, even if traditionally the supply side data collection has been in focus. The model is thus expected to improve our knowledge of the supply-demand interaction and particularly on the less documented area of services as inputs in the production process.

The pilot action mainly surveys the purchased services, ie. not including the services produced inhouse. The purchases include once-off purchases of services, such as a specific legal service for a specific purpose and constant ongoing purchases of services, such as telecommunication services.

The objective of the questionnaire is mainly to provide quantitative data on the purchases of services by businesses broken down by different activities. The model has been constructed in a general way that it could, in principal, be applied in any industry. These kind of data could be used as supplement information e.g. when compiling input-output tables for national accounts purposes. The secondary objective is to get more qualitative and indicate information about the businesses behaviour and operational changes in terms of increasing purchases of services partly due to increasing outsourcing and the geographical extention of relations to service providers.

In the following paragraphs the general structure of the model questionnaire and the reasoning behind shall be described. The questionnaire itself is enclosed in annex 1.

Box 2: The general structure of the model questionnaire

- 1. General information**
 - 1.1 General identification
 - 1.2 Legal form
 - 1.3 Main activity of the enterprises
 - 1.4 Ownership and group affiliation

- 2. Quantitative information**
 - 2.1 Employment information
 - 2.2 Economic information
 - 2.3 Breakdown of purchases by type of services
 - 2.4 In which services areas does your company expect to increase purchases of services?
 - 2.5 Breakdown of wages and salaries/employment by type of services (excluding hired in personal)
 - 2.6 What is a typical location of your supplier?
 - 2.7 Changes in business structure

The core question is question 2.3 concerning breakdown of purchases by type of services. The ambition is to get information about purchases at the detailed CPA class level.

The purpose of the question on expected increase in purchased services is to identify the areas of future potential. In the model questionnaire the question 2.4 is formulated at the detailed product level, but could be applied on more aggregated level as well (cf. 2.5).

The geographical relationship between the customers and the service providers is included as question 2.6 in order to evaluate the geographical extension of the potential markets. Are certain type of services limited to more local markets than others?

3. Eurostats pilot survey

The pilot survey co-financed by Eurostat is going to be carried out this autumn in 5 Member States, Denmark, Spain, France, Sweden and United Kingdom. The pilot survey operates with small populations of 200 respectively 500 accepted answers depending on the size of the country.

As stated above the questionnaire is designed as a general questionnaire to be applied in all activity classes. In order to identify the sectors to be surveyed a number of criteria were laid down:

1. To survey sectors which are sufficiently large in all participating Member States (number of enterprises, turnover and employment).
2. To survey sectors which can be found in all regions of the countries in question (to test the hypotheses on geographical location)
3. To survey services activities as well as manufacturing industry
4. To survey one IVAS sector (ie motorvehicle production industry, pharmaceuticals

industry, electric domestic appliances industry, food and drink industry)⁴

Using these objectives the result of preparatory work was that the following NACE categories should be included in the pilot survey:

- 1) 29 Manufacture of machinery and equipment n.e.c.
- 2) 52.1 Retail sale in non-specialised stores
- 3) 52.4 Other retail sale of new goods in specialised stores

The composition of NACE categories is left to the individual Member States to decide but the pilot survey only includes enterprises with more than 20 employees in order not to imply a unnecessary burden on the smaller enterprises.

4. Test results

Statistics Sweden has tested the draft questionnaire of the pilot study on the purchased services on a sample of 30 enterprises. The questionnaire was responded by 14 enterprises as shown in the table below. No reminder or any other measure have been taken to reduce the non-response.

Sectors (NACE)	Number of enterprises Test sample	Number of Respondents
29 "Manufacture of machinery and equipment n.e.c."	10	6
52.1 "Retail sale in non-specialised stores"	10	2
52.4 "Other retail sale of new goods in specialised stores"	10	6
Total	30	14

1. General Information

The variables "1.2 Legal form" and "1.3 Main activity of the enterprise" have been excluded from the Swedish questionnaire since these data are available in the business register.

All respondents have filled in the question 1.4 concerning ownership and group affiliates. Twelve of the respondents have reported that belong to a group.

2. Quantitative Information

2.1-2.2 Employment and economic information

All enterprises in the sectors 29 "Manufacture of machinery and equipment n.e.c." and 52.1 "Retail sale in non-specialised stores have provided all data requested on employment, total turnover and total purchases of goods and services. In the sector 2.4 "Other retail sale of new goods in specialised stores" however three enterprises have left these questions quite blank and one respondent has only provided data on employment 1998.

⁴ The so-called IVAS (Industry Value Added Services) project is financed by DGIII (EU Commission DirectorateGeneral for Industry) and carried out by IPTS (Institute for ProspectiveTechnological Studies), part of the EU Joint Research Center. The project is focusing on measuring the demand for services and especially the outsourcing of services from manufacturing industry based on the questionnaire presented in P. Bøegh Nielsen and S. Rikama (1998), cf. foot note 1

The respondents in the sector 29 "Manufacture of machinery and equipment n.e.c." consisted of 2 enterprises with more than 500 persons employed, 2 enterprises in the group 100 to 199 persons employed and 2 with less than 50 employees. The two respondents in sector 52.1 "Retail sale in non-specialised stores had around 50 persons employed. In the sector 52.4 "Other retail sale of new goods in specialised stores" 2 enterprises had more than 200 employees and the other ones may be assumed having less than 50 persons employed.

2.3 Breakdown of purchases by type of services in 1998

The breakdown of purchases by type of services into the 8 groups, each including more than one CPA class (4-digit) has been filled in by all respondents. Data on individual CPA classes included in the groups have however not been provided by two enterprises. The table below shows the number of values >0 in the specification of purchases by type of services in the three sectors.

	Sector (Nace Rev 1)			Total	
	29	521	529		
Number of respondents	6	2	6	6	14
Number of values > 0 by type of services					
Production related services:	5			5	
- Research and experimental development on natural sciences and engineering					
- Architectural, engineering and related technical consultancy	3			3	
- Technical testing and analysis	2			2	
Transport and distribution:	6	1	5	12	
- Storage and warehousing	1		2	3	
- Transport services	5	1	4	10	
- Other transport supporting services			1	1	
- Packaging services					
ICT-services:	6	1	5	12	
- Software expenditures	5		4	9	
- Other computer related services	4	1	4	9	
- Telecommunication services	4	1	2	7	
Human resources related services:	6	2	4	12	
- Training and educational services	5	1	2	8	
- Labour recruitment and provision. of personnel	4		2	6	
- Health and medical services	5	2	3	10	
Financial related services:	1		2	3	
- Financial auxiliary services					
- Financial leasing services	1		2	3	
Administration:	6	2	5	13	
- Legal services	2		1	3	
- Accounting, book-keeping and auditing	5	2	4	11	
- Business management and consultancy	1			1	
- Secretarial and translation services					
Marketing services:	6	2	5	13	
- Market research	2		1	3	
- Advertising	5	2	4	11	
- Direct marketing services	2	2	3	7	
- Other marketing or sales services (exhibition and fairs etc.)	3	2	2	7	
Auxiliary services:	5	2	4	11	
- Canteen and catering	1			1	

- Management of real estate	2			2
- Investigation and security	3	2	2	7
I- Industrial cleaning	4	2	3	9
Other services: (Please specify)				

2.5 The breakdown of employment by type of services

The original question asked for a breakdown of wages and salaries by type of services and has not worked well in the Swedish test. As a result the question has been rephrased in the form presented in this questionnaire which has not been tested by Statistics Sweden.

2.4 and 2.6 Qualitative information

No problem was related to the “tick-box” questions 2.4 and 2.6 concerning the expectations of purchase of services during the next 2 years and the typical location of the supplier. All respondents have filled in these questions completely.

Other questions

All respondents have answered “No” on the question 3.9: “Did you encounter difficulties in filling out this questionnaire?”

The time used for completing the questionnaire varied for the main part of the respondents between 10 minutes and 60 minutes. One enterprise has however used 4 hours because it chose to investigate all invoices for the previous accounting year before answering the questions.

5. Conclusions

The main result of the test of the questionnaire carried out by Statistics Sweden was that the enterprises have tackled most of the questions successfully. The used services products categories have not caused larger problems for the enterprises.

The main conclusion concerning the feasibility of the questionnaire can also be supported by the experiences from the test carried out by Statistics Denmark. Actually, this test was carried out by the relevant branch organisations for Statistics Denmark resulting in only a few answers reported back to Statistics Denmark. The conclusions were almost the same reporting only minor problems; although the problem of identifying - but not understanding should be stressed - the proposed service categories in the accounting system of the enterprises was underlined in the Danish testing.

One conclusion is that the enterprises much easier are able to break down their turnover than to breakdown their purchases. Traditionally the purchases/ cost side seems to have had less attention than the output from their main activity in the accounting systems within the enterprises.

Annex 1

DRAFT QUESTIONNAIRE

PURCHASES OF

SERVICES BY ENTERPRISES

Version 3

1. General Information

1.1 General Identification:

Name: _____

Address: _____

Name of contact person: _____

Telephone: _____

Fax: _____

E-mail: _____

1.2 Legal form

Partnership:

Limited company:

Sole proprietorship:

Other (description): _____

1.3 Main activity of the enterprise (description)

1.2.1 Primary activity: _____

1.4 Ownership and group affiliation

1.3.1 The enterprise belongs to a group: yes: _____ no: _____

If yes

1.3.2 Is the company head of the group: _____ subsidiary: _____

If subsidiary, location of head of the group (*country*): _____

2. Quantitative Information

2.1 Employment information

2.1.1 No. of persons employed end of 1998: _____

2.1.2 No. of persons employed end of 1997: _____

2.1.3 Expected no. of persons employed end of 1999: _____

2.2 Economic information

2.2.1 Total turnover in year 1998: _____

2.2.2 Total turnover in year 1997: _____

2.2.3 Total purchases of goods and service in year 1998: _____

2.2.4 Total purchases of goods and service in year 1997: _____

2.3 Breakdown of purchases by type of services in 1998

Type of services	Purchases (In national currency)	Per cent (estimated)
Production related services:	<input type="text"/>	100 %
- Research and experimental development on natural sciences and engineering	<input type="text"/>	<input type="text"/>
- Architectural, engineering and related technical consultancy	<input type="text"/>	<input type="text"/>
- Technical testing and analysis	<input type="text"/>	<input type="text"/>
Transport and distribution:	<input type="text"/>	100 %
- Storage and warehousing	<input type="text"/>	<input type="text"/>

- Transport services		
- Other transport supporting services		
- Packaging services		
ICT-services:		100 %
- Software expenditures		
- Other computer related services		
- Telecommunication services		
Human resources related services:		100 %
- Training and educational services		
- Labour recruitment and provision. of personnel		
- Health and medical services		
Financial related services:		100 %
- Financial auxiliary services		
- Financial leasing services		
Administration:		100 %
- Legal services		
- Accounting, book-keeping and auditing		
- Business management and consultancy		
- Secretarial and translation services		
Marketing services:		100 %
- Market research		
- Advertising		
- Direct marketing services		
- Other marketing or sales services (exhibition and fairs etc.)		
Auxiliary services:		100 %
- Canteen and catering		
- Management of real estate		
- Investigation and security		

- Industrial cleaning

Other services: (Please specify)

2.4 In which services areas does your company expect to increase purchases of services?

Type of services

The next 2 years

	Not at all	Somewhat	Considerably	Not relevant	Do not know
Production related:					
- Research and experimental development on natural sciences and engineering	<input type="checkbox"/>				
- Architectural, engineering and related technical consultancy	<input type="checkbox"/>				
- Technical testing and analysis	<input type="checkbox"/>				
Transport and distribution:					
- Storage and warehousing	<input type="checkbox"/>				
- Transport services	<input type="checkbox"/>				
- Other transport supporting services	<input type="checkbox"/>				
- Packaging services	<input type="checkbox"/>				
ICT – services:					
- Software expenditures	<input type="checkbox"/>				
- Other computer related services	<input type="checkbox"/>				
- Telecommunication services	<input type="checkbox"/>				
Human resources:					
- Training and educational services	<input type="checkbox"/>				
- Labour recruitment and provision. of personnel	<input type="checkbox"/>				
- Health and medical services	<input type="checkbox"/>				
Financial related services:					
- Financial auxiliary services	<input type="checkbox"/>				
- Financial leasing services	<input type="checkbox"/>				
Administration:					
- Legal services	<input type="checkbox"/>				
- Accounting, book-keeping and auditing	<input type="checkbox"/>				
- Business management and consultancy	<input type="checkbox"/>				
- Secretarial and translation services	<input type="checkbox"/>				
Marketing and sales:					
- Market research	<input type="checkbox"/>				
- Advertising	<input type="checkbox"/>				
- Direct marketing services	<input type="checkbox"/>				
- Other marketing or sales services (exhibition and fairs etc.)	<input type="checkbox"/>				
Auxiliary services:					
- Canteen and catering	<input type="checkbox"/>				
- Management of real estate	<input type="checkbox"/>				

- Investigation and security	<input type="checkbox"/>				
- Industrial cleaning	<input type="checkbox"/>				
Other services: (Please specify) _____	<input type="checkbox"/>				

2.5 Breakdown of wages and salaries/employment by type of services (excluding hired in personal)

2.5.1 Total wages and salaries in 1998: _____

2.5.2 Please estimate the breakdown of the total wages and salaries into the following categories:

Type of services	Per cent (estimated)	or	No. of full-time heads
Main activity of the enterprise	<input style="width: 100px; height: 20px;" type="text"/>		<input style="width: 100px; height: 20px;" type="text"/>
Production related services	<input style="width: 100px; height: 20px;" type="text"/>		<input style="width: 100px; height: 20px;" type="text"/>
Transport and distribution	<input style="width: 100px; height: 20px;" type="text"/>		<input style="width: 100px; height: 20px;" type="text"/>
ICT – services	<input style="width: 100px; height: 20px;" type="text"/>		<input style="width: 100px; height: 20px;" type="text"/>
Human resources related services	<input style="width: 100px; height: 20px;" type="text"/>		<input style="width: 100px; height: 20px;" type="text"/>
Administration	<input style="width: 100px; height: 20px;" type="text"/>		<input style="width: 100px; height: 20px;" type="text"/>
Marketing services	<input style="width: 100px; height: 20px;" type="text"/>		<input style="width: 100px; height: 20px;" type="text"/>
Auxiliary services	<input style="width: 100px; height: 20px;" type="text"/>		<input style="width: 100px; height: 20px;" type="text"/>
Other activities	<input style="width: 100px; height: 20px;" type="text"/>		<input style="width: 100px; height: 20px;" type="text"/>

2.6 What is a typical location of your supplier?

Type of services	Location					
	Same region	Same country	Within EU	Outside EU	Not relevant	Don't know
Production related:						
- Research and experimental development on natural sciences and engineering	<input type="checkbox"/>					
- Architectural, engineering and related technical consultancy	<input type="checkbox"/>					
- Technical testing and analysis	<input type="checkbox"/>					
Transport and distribution:						
- Storage and warehousing	<input type="checkbox"/>					
- Transport services	<input type="checkbox"/>					
- Other transport supporting services	<input type="checkbox"/>					
- Packaging services	<input type="checkbox"/>					
- Labour recruitment and provision. of personnel	<input type="checkbox"/>					
ICT – services:						
- Software expenditures	<input type="checkbox"/>					
- Other computer related services	<input type="checkbox"/>					
- Telecommunication services	<input type="checkbox"/>					
Human resources:						
- Training and educational services	<input type="checkbox"/>					
- Labour recruitment and provision. of personnel	<input type="checkbox"/>					
- Health and medical services	<input type="checkbox"/>					
Financial related services:						
- Financial auxiliary services	<input type="checkbox"/>					
- Financial leasing services	<input type="checkbox"/>					
Administration:						
- Legal services	<input type="checkbox"/>					
- Accounting, book-keeping and auditing	<input type="checkbox"/>					
- Business management and consultancy	<input type="checkbox"/>					
- Secretarial and translation services	<input type="checkbox"/>					
Marketing and sales:						
- Market research	<input type="checkbox"/>					
- Advertising	<input type="checkbox"/>					
- Direct marketing services	<input type="checkbox"/>					

- Other marketing or sales services (exhibition and fairs etc)

Auxiliary services:

- Canteen and catering

- Management of real estate

- Investigation and security

- Industrial cleaning

Other services: (please specify) _____

2.7 Changes in business structure

If your company in the last three years has undergone structural changes which could influence the comparability of the answers , please specify the changes

2.8 How long time did you spend on filling out this questionnaire?

Min.

2.9 Did you encounter difficulties in filling out this questionnaire?

Yes No

If yes, please specify _____

ANNEX 2: Services included by CPA

Production related services

Group 73.1	Research and experimental development services on natural sciences and engineering
Class 74.20	Architectural, engineering and related technical consultancy services
Class 74.30	Technical testing and analysis services

Transport and distribution

<i>Part of section I</i>	Transport, storage and communication services
Class 74.82	Packaging services

ICT-services

Class 64.20	Telecommunications services
Division 72	Computer and related services

Human resources

Class 74.50	Labour recruitment and provision of personnel services
Class 80.42	Adult education services
Class 85.12	Medical practice services

Financial related services

Division 67	Services auxiliary to financial intermediation
Class 65.21	Financial leasing services

Administration

Class 74.11	Legal services
Class 74.12	Accounting, book-keeping and auditing
Class 74.14	Business and management consultancy services
Class 74.83	Secretarial and translation services

Marketing and Sales

<i>Part of Section G</i>	Wholesale and retail trade services
<i>Part of Class 74.13</i>	Market research and public opinion polling services
Class 74.40	Advertising services
<i>Part of Class 74.84</i>	Other business services (Exhibition and fairs)

Auxiliary

Group 55.5	Canteen and catering services
Class 70.32	Management services of real estate on a fee or contract basis
Class 74.60	Investigation and security services
Class 74.70	Industrial cleaning services

Other services: all services not mentioned in the above categories

