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PRIORITIES IN STATISTICS ON SERVICES

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1 Introduction

1. From its very beginning the principle goal of the Voorburg group has been to join forces in improving the statistical coverage of the service industries. In the first years the group concentrated on making contributions to the development of the CPC. Later on coordination and exchange of thoughts became the core of the activities. At the fourth meeting of the Voorburg group in Ottawa it was felt that in order to be able to continue its activities in a fruitful way, an overview is needed showing the major problems in the field of service statistics as identified by the participants and their focal points of action over the next few years.

2. An inquiry was agreed upon and to produce such an overview the present authors volunteered. The meeting asked them to circulate an experimental inquiry form so as to be able to influence the inquiry at an early stage and to make sure it would correspond with their views on what are the really important items.

3. We proceeded likewise. In November 1989 the experimental form was circulated and the members of the Group were asked to comment on it. Many useful comments were received which led to an adapted questionnaire. To our regret, for several reasons we could not comply with everything what asked. Some comments contradicted each other, others would lead to a considerable lengthening of the inquiry form or would imply an in-depth survey for which the authors did not volunteer at the time, i.e. it would take much more efforts then they envisaged or could invest.

4. Nevertheless, within the boundaries of the possible, the final questionnaire covers most of the issues considered to be relevant, including open questions to bring in missing issues. It was send out in May 1990 and by June most of the participating national institutes had responded so that no general non-response procedure was needed (for which we are very grateful). In the next section the results will be presented; full detail of the answers can be found in the annex.

5. Some remarks are in place. First of all, as said before, it were the national institutes which responded. We received only one form filled out by an international institution; some bilateral contacts learned that the inquiry was judged only fitting national institutes because international institutions do not usually engage in statistical surveys themselves. Even though one can differ of opinion on this, we decided to leave it at that, also because the prime objective of the survey is not harmed by it. The one form filled out by an international organization mainly stresses the need for statistics on international trade in services, which should be noted.
Secondly, there was a problem in dealing with the results. From one country forms were received from two national institutes. In order to prevent a bias in the averages of the scores, for most of the items the scores of these institutes were averaged first.
The last problem to be mentioned is one of representativity. One participant (Japan) stressed that the answers to the questionnaire do not reflect official points of view or agreed upon policies; as none of the others made such comments we hope it may be assumed that the answers received do represent plans and ideas held at the various institutions.

2 Results

6. In presenting the results attention is focussed mainly on the differences between the scores rather than on absolute values. This because biases are known to disturb the trustworthiness of these absolute values. It must be born in mind though that both scales used have an upward tendency: 3 means either urgent or important.

7. The first two questions were posed in order to get an idea of what are considered the most important aspects of services, and which services are thought to be growth leaders for the 1990's. The average scores on aspects of services are displayed in table 1.

Table 1. Importance attached to statistical coverage of aspects of services

	Average rating
Contribution to GDP	5
Contribution to employment	5
Annual growth rates	5
Short term growth rates	3
Growth of in-house services	3
Growth of contracting out of services	3
Investments in service industries	4
Investments in services	4
Volume growth of services	4
Price developments in services	4
Contracting out of services	3
Productivity in services	4
Technological change in services	3
Direct imports/exports of services	4
Supply of services by affiliates abroad or foreign subsidiaries	3

8. This table lists relative importance attached to the different aspects of services. None of the mentioned items averaged below 3, most scored about 3 or 4. It is clear that in general services' contribution to both GDP and employment, and the annual growth rates were thought the most important. Most respondents agreed on these three issues, which was not always the case elsewhere. The individual scores (see annex) show that direct imports and exports of services, for example, were rated 5 by many, but not more than 2 by others.

9. In the second question, which asked to state the five growth leaders of the 1990's, to our regret we did not focus explicitly on service industries. Fortunately, in most cases the question was interpreted in this way, and in only one case non-service categories had to be eliminated. Another problem turned out to be the ISIC code. Several countries still work with Revision 2, whilst others have already adapted Revision 3; if possible, Revision 2 has been translated in Revision 3.

To make this possible, and to facilitate comparison between countries, only ISIC divisions have been listed in table 2.

Table 2. Growth leaders for the 1990's

ISIC code and title, rev. 3	Total occurrence
00 Pollution abatements and control...	2
00 Tourism	1
51 Wholesale trade	1
52 Retail trade	1
55 Hotels and restaurants	2
60 Land transport	2
62 Air transport	2
64 Telecommunication	8
65 Financial intermediation	5
66 Insurance	2
67 Activities auxiliary to financial...	1
71 Renting of machinery and equipment	1
72 Computer and related activities	9
74 Business services	7
80 Education	2
85 Health and social work	6
92 Motion picture, radio and...	1

N CE

10. As was to be expected, telecommunication and computer activities scored most. Interesting was the listing of "Health and social work", which is to be considered a major growth leader, according to a remarkable number of respondents. "Business services" and "Financial intermediation" are next, followed by transport, represented by "Land transport" and "Air transport" (codes 60 and 62 respectively), which are often listed as one.

11. ISIC classifications where not always sufficient in indicating services, judging by both 00 codes and several remarks. "Pollution abatements control" was endorsed by two countries, "Tourism" by only one, which may be due to the fact that other countries included booming tourism in group "Hotels and restaurants".

12. The purpose of question 3 was to find out which conceptual aspects in the view of participants needed to be addressed most urgently. The aspects suggested were definitions, classifications, time of recording, registration and valuation. The scores on these are shown in table 3a. Regarding definitions and classifications a more detailed question was posed, relating to sub-aspects. The scores mentioned in table 3a are the averages of the sub-aspects, in which the subjoined aspects weigh less, as they are generally rated by only one respondent. Listings in categories "others" are indented to show they were not present in the original questionnaire. Looking at the scores, all in all the conclusion must be that the urgency to address the various main conceptual aspects does not vary much; only classifications score higher.

Table 3a. Subjects thought to contain conceptual issues to be addressed urgently

	Average rating
Definitions	3
Classifications	4
Time of recording	3
Registration	3
Valuation	3
Average rating	3

13. The scores on the sub-aspects regarding definitions and classifications are presented in table 3b and 3c respectively. Table 3b shows residence definitions were not considered urgent at all, and in general scores are low, with the exception of the ratings of the additions made by three countries. From the items mentioned in the questionnaire only "Products" score higher than average. As was mentioned by two countries, transactors and transactions are not considered to need much attention, since they are largely addressed by international standards and have already been paid attention to in the last few years.

Table 3b. Definitions

	Average rating
Transactors	3
Transactions	3
Products	4
Residence	2
International aspects involving 3rd parties	5
Deflators	4
Definition of activity and product output	5
Average of ratings	3

14. In classifications, table 3c, an important element is the product classification. It was rated high as an item in the original form and several aspects were added which relate to it. Taking into consideration that the definition of products was also judged as a problem needing urgent attention, it can be concluded, in general, that product classification and definition are seen as the most important issues in this respect.

Table 3c. Classifications

	Average rating
Activities	3
Products	4
Links between the CPC and the CHGS	5
Classification of trade in services and the links to the CPC	5
Classification of processes, capital and labour with respect to technologic level and skill	3
CPC definitions need to relate to how output of activity is defined	5
Average of ratings	4

15. Question 4 relates to problems of a technical and/or practical nature in the field of services. The urgency-scores in this respect are shown in table 4. A main problem appears to be the statistical universe and use of administrative records.

Table 4. Problems of a technical or practical nature regarding service statistics in need of urgent attention

	Average rating
Estimation procedures in general	3
Surveys	3
Sampling	3
Statistical universe	4
The use of administrative records	4
Collection of relevant prices	4
Definition of activity and product output and prices	5
Average of ratings	3

16. The purpose of questions 5 and 6 was to find out whether measurement problems are concentrated in specific service industries, regarding current price measurement and constant price measurement respectively. The average scores for these industries are given in table 5.

Table 5. Urgency of solving problems regarding the measurement of value added

	Current prices	Constant prices	Average rating
Services in general	3	3	3
Government	3	3	3
Banking	3	4	4
Insurance	3	4	4
Trade	3	3	3
Intermediation	3	4	4
Processing	3	3	3
Business services	3	4	4
Non-profit organizations	4	5	5
Catering	4	4	4
Distribution	4	4	4
Ocean transport		4	2
Education		4	2
Average of ratings	3	4	

17. It turns out that current price measurement on the average is less of a problem then constant price measurement. The problems in constant price measurement judged most urgent to be addressed were banking, insurance, financial intermediation and business services.

18. Question 7 represents more or less the core of the questionnaire. Its purpose was to find out what problems countries are going to tackle over the next few years and it could give some guidance as to the possibilities to join forces. The results are presented in table 6. The leftmost column lists the number of respondents mentioning an item, where each + represents one respondent. The middle column states the average rating given by these respondents, while the rightmost one contains the overall average rating. As was to be expected, the average rating equals or surpasses the overall average rating; the planned efforts are aimed at the most problematic industries.

19. It turns out that several of the respondents will address problems of a technical or practical nature, specifically in defining the statistical universe and the estimation procedures. Quite a few will concern themselves with the measurement of value added in constant prices, especially in insurance, but also in banking, financial intermediation and business services; this group was described by Australia as being one of three distinct work streams. Estimation procedures and problems with the statistical universe are also subjects that a relatively important number of participants will address.

Table 6. Problems to be addressed in the next two years

	Total occurrence	Specific average	Total average rating
Improving data collection	+		
Subjects containing conceptual issues			
Definitions	++		3
Products	+++	4	4
International aspects involving 3rd parties	+	5	5
Classifications	+		4
Products	+	5	4
Valuation	+	4	3
Problems of a technical or practical nature			
Estimation procedures in general	++++	4	3
Surveys	+	4	3
Statistical universe	+++++	4	3
The use of administrative records	++	4	4
Collection of relevant prices	+	4	4
Problems regarding the measurement of value added in current prices			
Services in general	+	4	3
Government	+	4	2
Banking	+	5	3
Insurance	++	4	3
Trade	+	4	3
Intermediation	+	4	3
Business services	+		3
Catering	+	4	4
Problems regarding the measurement of value added in constant prices			
Services in general	+	5	3
Government	++	5	3
Banking	+++	4	4
Insurance	++++	4	4
Trade	+	4	3
Intermediation	+++	4	4
Business services	+++	4	4
Ocean transport	+	4	4
Catering	+	4	4
Education	+	4	4

20. Question 8 was meant to give some deeper insights in the problem of constant price measurement. The scores on this complex question are presented in table 7. Double extrapolation has been left out, as none of the respondent selected this method as being the most appropriate one. For services in general double deflation was most often selected; this is also reflected in the sub-categories, e.g. trade and business services. The clearest exception to this was, of course, the government sector, for which input deflation was chosen most often. Mixed methods were described by Norway (output extrapolated, inputs deflated), Canada (combination of price or volume indicators for outputs and/or inputs) and in a remark by the BEA (single extrapolation using a measure of gross output, if double deflation is not possible). France mentions that "En pratique il faut améliorer les connaisances du prix des outputs et du prix des inputs".

Table 7. Most appropriate method for measurement of value added in constant prices

	Double deflation	Input deflation	Extrapolation single	mixed	Total
Services in general	9	1	1		11
Government		8	2		10
Banking	3	1	4	2	10
Insurance	3	2	3	2	10
Trade	7		2		9
Intermediation	5		2	2	9
Processing	6		2	1	9
Business services	7	1	1		9
Catering	1				1
Transport			1		1
Nonprofit		1			1

3 Conclusion

21. This little investigation shows that participants of the Voorburg group share concerns regarding specific aspects of statistical measurements of service industries. Especially noticeable is the fact that the problems to be attacked coincide in quite a few instances. For instance measurement of value added in constant prices for services like insurance, banking, intermediation etc. are topics several countries are planning to address. This might be a fruitful ground for further co-operation.

Q U E S T I O N N A I R E O N
S E R V I C E S T A T I S T I C S

Remarks

(1c) Annual data needed for all items scored 4 or 5.
(1d) Quarterly data needed for all items scored 5.

	Importance attached to statistical coverage of aspects of services	Avg	AUS	CAN	FIN	FRA	JAP	NET	NOR	NZ	UK	USA	SWE
	1a Contribution to GDP	5	5	5	5	5	4	5	5	4	5	5	5
	b Contribution to employment	5	5	5	5	5	4	4	5	5	3	5	4
*	c Annual growth rates	5	5	5	5	5	4	4	5	3	5	4	5
*	d Short term growth rates	3	3	5	3	4	4	4	4	2	3	4	2
	e Growth of in-house services	3	2	3	3	2	3	3	3	3	3	4	2
	f Growth of contracting out of services	3	2	3	3	5	3	4	3	3	3	4	2
	g Investments in service industries	4	5	4	4	4	3	3	4	4	4	3	4
	h Investments in services	4	4	4	4	4	3	3	3	4	4	3	4
	i Volume growth of services	4	4	5	5	3	3	5	5	5	3	5	5
	j Price developments in services	4	4	5	5	3	3	5	5	4	3	4	5
	k Contracting out of services	3	2	3	3	5	3	3	3	3	3	4	2
	l Productivity in services	4	4	4	5	2	3	3	4	5	4	4	4
	m Technological change in services	3	3	4	2	4	3	3	3	4	3	4	2
	n Direct imports/exports of services	4	5	5	5	3	2	4	5	5	4	5	4
	o Supply of services by affiliates abroad or foreign subsidiaries	3	4	3	2	4	2	4	3	4	4	4	2

Growth leaders for the 1990's

	ISIC code and title, rev. 3	Sum	AUS	CAN	FIN	FRA	JAP	NET	NOR	NZ	UK	USA	SWE
2	00 Polution abatement and control...	2						x				x	
	00 Tourism	1								x			
	51 Wholesale trade	1	x										
	52 Retail trade	1									x		
	55 Hotels and restaurants	2	x						x				
	60 Land transport	2	x								x		
	62 Air transport	2							x		x		
	64 Telecommunication	8		x	x	x		x	x	x	x		x
	65 Financial intermediation	5		x	x		x				x	x	
	66 Insurance	2		x									x
	67 Activities auxilliary to financial	1		x									
	71 Renting of machinery and equipment	1					x						
	72 Computer and related activities	9	x	x	x	x	x	x		x		x	x
	74 Business services	7		x	x	x			x		x	x	x
	80 Education	2		x								x	
	85 Health and social work	6			x	x		x	x	x		x	
	92 Motion picture, radio and...	1				x							

Remarks

(3.1a, 3.1b) Existing international standards largely address the issues in 3.1a and 3.1b. Therefore the subjects are not seen as having the highest priority.

(3.1b, 3.1c) For some industries, e.g. financial; treatment of investment in intellectual and human capital.

We have spent quite a considerable amount of resources in overcoming transactor and transaction issues over the past few years. We have spent very little with respect to the product outputs. Hence the ratings as shown.

(3.2) We have not adopted either of these standards yet so it is too early to make an informed comment.

(3.2) Classification of auxiliary units.

(3.3) Especially output which has a production process of long duration (e.g. technical services).

(3.4) This problem exists for trade and for certain other service activities, mainly in finance. For most service activities, there is not really a choice.

(3.5) 4, and 5 for financial industries.

Subjects thought to contain conceptual issues to be addressed urgently

Subjects thought to contain conceptual issues to be addressed urgently	Avg	AUS	CAN	FIN	FRA	JAP	NET	NOR	NZ	UK	USA	SWE
Definitions												
*3.1a Transactors	3	2	2	2	2	3	5	3	2	2	3	3
* b Transactions	3	2	5	3	4	3	4	2	3	2	2	4
c Products	4	4	4	5	5	3	4	3	3	4	3	4
d Residence	2	1	3	2	4	1	2	2	2	3	2	2
e International aspects involving 3rd parties	5								5			
f Deflators	4									4		
g Definition of activity and product output	5										5	
Classifications												
*3.2a Activities	3	2	2	1	5	4	2	2		3	3	2
b Products	4	3	5	5	5	4	5	2		2	2	3
c Links between the CPC and the CHGS	5			5								
d Classification of trade in services and the links to the CPC	5			5								
e Classification of processes, capital and labour with respect to technological level and skill	3		3									
f CPC definitions need to relate to how output of activity is defined	5										5	
* 3.3 Time of recording	3	1	2	3	2	4	3	2	2	3	1	5
* 3.4 Registration	3	1	2	3	5	4	3	2		3	3	3
* 3.5 Valuation	3	2	5	3	3	4	4	2	5	2	3	5

Remarks

(4c) Our main concern is identifying the most suitable variables for stratification. This is to some extent dependant on data availability but also there are concepted problems - judging what variable wil give the most reliable result when estimating other variables.
(4d) There are difficulties in setting up a statistical universe for our International Trade in Services data. In respect of these data the ranking would be 3.
(4e) Especially the trade taxation register.
The various Services Industries Surveys that have been conducted in Australia have raised a range of problems, but these are no different to those that are encountered in the areas being surveyed for the first time. While we have encountered difficulties in identyfying the statistical universe, developments in an Register of Businesses should overcome these.

Problems of a technical or practical nature regarding service statistics in need of urgent attention	Avg	AUS	CAN	FIN	FRA	JAP	NET	NOR	NZ	UK	USA	SWE
4a Estimation procedures in general	3	1	4	5	5	3	2	3	3	3	3	4
b Surveys	3	2	2	2	5	4	2	2	3	4	3	2
* c Sampling	3	1	2	2	5	4	2	2		4	3	2
* d Statistical universe	4	1	5	5	5	4	3	4	2	3	3	4
* e The use of administrative records	4		3	5								
f Collection of relevant prices	4							4				
g Definition of activity and product output and prices	5										5	

Remarks

	Urgency of solving problems regarding the measurement of value added in current prices	Avg	AUS	CAN	FIN	FRA	JAP	NET	NOR	NZ	UK	USA	SWE
5a	Services in general	3	4	1	3	5	3	5	3	3	3	3	2
b	Government	3	3	1	2		3	5	2	5	3	3	4
c	Banking	3	1	2	5		3	5	2	3	4	5	3
d	Insurance	3	1	4	4		3	5	2	3	4	5	4
e	Trade	3	1	2	3		3	4	4	2	4	4	4
f	Intermediation	3	1	3	5		3	2	2	3	4	5	2
g	Processing	3		3	3		3	2	3	2	3	2	2
h	Business services	3	1	1	4		4	3	2	4	4	2	2
i	Non-profit organisations	4	2							5			
j	Catering	4									4		
k	Distribution	4									4		
l	Collection of data on purchased services from multi location firms	5										5	

Most important problems of measurement of value added in current prices

FIN Definition and measurement of output in banking sector (e.g. netting problem); input bank service charge and other service payments, methodological differences in measuring value added of public and private services, different statistical units in basic data (manufacturing - establishments; services - enterprises).

UK Assuming a constant gross/net output ratio.

NZ Non-market services, where we are currently limited to valueing output by measuring the cost of intermediate input and compensation of employees.

NOR Wholesale and retail trade implicitly measured (particularly problematic). More urgent problems for early estimates (indicated based estimates) than for later estimates (based on annual information).

BEA Problems in measurement of value added in current prices, choice of registration in certain industries, and difficulties of collecting purchased services for multi-location firms.

AUS Work needs to be done in delining the range of outputs required from this sector. This may then lead to a high ranking for one of the sub-sectors of services. Second, the government sector is a very important employer in this country.

CAN The problem is one of data collection rather than of measurement, except in insurance where the absence of the measurement of investment income is a problem.

Remarks

	Urgency of solving problems regarding the measurement of value added in constant prices	Avg	AUS	CAN	FIN	FRA	JAP	NET	NOR	NZ	UK	USA	SWE
6a	Services in general	3	2	2	5	3	4	5	3	5	3	3	3
b	Government	3	2	3	3		3	5	2	5	3	1	4
c	Banking	4	4	5	5		3	5	4	4	4	3	4
d	Insurance	4	4	5	5		3	5	4	4	4	3	4
e	Trade	3	2	3	4		3	2	4	4	4	1	2
f	Intermediation	4	4	5	5		3	4	4	4	4	3	4
g	Processing	3		4	4		3	4	3	2	3	1	2
h	Business services	4	3	5	5		3		3	4	4	3	4
i	Ocean transport	4							4				
j	Non-profit organisations	5								5			
k	Catering	4									4		
l	Distribution	4									4		
m	Education	4		4									

Most important problems in measurement of value added in constant prices

FIN Definition of products; respective data collection; the lack of regular price indices in service sector.

UK Unit of output is often difficult to define. Difficulty is getting relevant deflators. Mix of private/public activity e.g. health and education makes measurement difficult.

NOR Volume value added most problematic in wholesale and retail trade; ocean transport and financial institutions.

BEA Lack of accepted definitions of output.

Remarks

These problems affect different sectors of the universe in varying degrees. Priorities will therefore vary with the sector under review. We propose to examine these issues for business services and make some modest efforts in the areas of banking, insurance and financial intermediation.

There are three distinct work streams: 6(d,c,f,h); 3.1(c), 5(a); 4(d).

(3.2) Definition of "The computer industry" and measures to assess its performance; adaptation of ISIC rev. 3 possibly on a joint basis with Australia.

Those rated 4 at least. CBS will conduct a general revision (main revision) of the national accounts during the next 3 - 4 years. In that context, several problems of services will be reviewed.

Problems to be addressed in the next two years	Sum	AUS	CAN	FIN	FRA	JAP	NET	NOR	NZ	UK	USA	SWE
- Improving data collection	1										x	
3.1 Definitions	2	x									x	
3.1c Products	3	x	x	x								
3.1e International aspects involving 3rd parties	1								x			
*3.2 Classifications	1								x			
3.2b Products	1		x									
3.5 Valuation	1						x					
4a Estimation procedures in general	4		x	x							x	x
4b Surveys	1									x		
4d Statistical universe	5	x	x	x				x				x
4e The use of administrative records	2		x	x								
4f Collection of relevant prices	1							x				
5a Services in general	1	x										
5b Government	1											x
5c Banking	1			x								
5d Insurance	2			x						x		
5e Trade	1							x				
5f Intermediation	1			x								
5h Business services	1				x							
5j Catering	1									x		
6a Services in general	1						x					
6b Government	2						x					x
6c Banking	3	x		x				x				
6d Insurance	4	x		x				x		x		
6e Trade	1							x				
6f Intermediation	3	x		x				x				
6h Business services	3	x			x							x
6i Ocean transport	1							x				
6k Catering	1									x		
6m Education	1									x		

Remarks

3a) When double deflation is not possible, single extrapolation *
ɜing a measure of gross output is acceptable when ratio of gross
ɜtput to value added is close to 1.0.
3a) En pratique il faut ameliorer les connaisances du prix des
ɪtputs et du prix des inputs.
ne problem is use of double deflation without updated input
tructures.

Most appropriate method for measurement of value added in constant prices		Sum	AUS	CAN	FIN	FRA	JAP	NET	NOR	NZ	UK	USA	SWE
8a Services in general	Double deflation	9		x	x	x	x	x	x	x		x	x
	Input deflation	1									x		
	Single extrapolation	1	x										
	Double extrapolation												
	Mixed extrapolation												
b Government	Double deflation												
	Input deflation	8	x		x		x	x	x	x		x	x
	Single extrapolation	2		x							x		
	Double extrapolation												
	Mixed extrapolation												
c Banking	Double deflation	3			x		x					x	
	Input deflation	1						x					
	Single extrapolation	4	x							x	x		x
	Double extrapolation												
	Mixed extrapolation	2		x					x				
d Insurance	Double deflation	3			x		x					x	
	Input deflation	2						x			x		
	Single extrapolation	3	x							x			x
	Double extrapolation												
	Mixed extrapolation	2		x					x				
e Trade	Double deflation	7		x	x		x	x	x	x		x	
	Input deflation												
	Single extrapolation	2	x										x
	Double extrapolation												
	Mixed extrapolation												
f Intermediation	Double deflation	5			x		x	x		x		x	
	Input deflation												
	Single extrapolation	2	x										x
	Double extrapolation												
	Mixed extrapolation	2		x					x				
g Processing	Double deflation	6			x		x	x	x	x		x	
	Input deflation												
	Single extrapolation	2	x										x
	Double extrapolation												
	Mixed extrapolation	1		x									

Remarks

		Sum	AUS	CAN	FIN	FRA	JAP	NET	NOR	NZ	UK	USA	SWE
e Business services	Double deflation	7		x	x		x	x	x			x	x
	Input deflation	1									x		
	Single extrapolation	1	x										
	Double extrapolation												
	Mixed extrapolation												
f Catering	Double deflation	1									x		
	Input deflation												
	Single extrapolation												
	Double extrapolation												
	Mixed extrapolation												
g Transport	Double deflation												
	Input deflation												
	Single extrapolation	1									x		
	Double extrapolation												
	Mixed extrapolation												
h Nonprofit	Double deflation												
	Input deflation	1										x	
	Single extrapolation												
	Double extrapolation												
	Mixed extrapolation												

Explanation of mixed method where used

NOR Output extrapolated, inputs deflated.
CAN The method would use some combination of price or volume indicators for outputs and/or inputs.