

VOORBURG GROUP ON SERVICE STATISTICS

TENTH MEETING

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INTERCOUNTRY COMPARISON OF SERVICE INDUSTRY STATISTICS IN VOORBURG GROUP
MEMBER COUNTRIES

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INTRODUCTION

1. For the most recent Voorburg Group meetings, Australia has prepared a paper which summarised the available data for the computer services, telecommunications, audio-visual and insurance industries for Voorburg Group member countries. The papers have also presented a breakdown of revenue and expenses for the computer services industry.
2. The most recent of these papers was "The Composition and Structure of the Telecommunications, Audio-visual, Insurance and Computer Service Industries in Voorburg Group member Countries" which was presented at the Sydney meeting in 1994. The discussion of that paper concluded that intercountry comparisons were very important and that work should continue towards improving international comparability.
3. In response to that discussion, Australia gave an undertaking to the meeting to review and continue the collection of these data, and to report to the 1995 Voorburg meeting. This paper presents the findings of that work.

METHODOLOGY

4. As in previous years, each member country was approached to provide data in respect of selected service industries. However, in accordance with last year's commitment to review the collection of data, a number of changes to the data requested were implemented. Specifically:
 - . the number of industries for which data were sought was expanded. The industries covered in this year's study were Computer services, Hotels, restaurants and cafes, Legal and accounting, Insurance, Telecommunications and the Audio visual industries;
 - . for clarification the ISIC Rev 3 Classes to be covered within each industry were indicated, and countries were asked to indicate where the industry for which they reported data was different to the ISIC Rev 3;
 - . the data items for which information was sought were number of businesses, employment and value added (or industry gross product) for each industry, to enable proportions to be derived. The information on number of businesses and employment was the same as in previous years; however, the collection of value added was introduced this year following comments last year about the appropriateness of revenue (which had been used previously);
 - . these data items were also sought for the total economy to enable proportions to be derived, rather than just seeking the proportions that each industry represented, as was done last year;
 - . provision was made for comments clarifying or qualifying any of the information provided.

5. Finally, member countries were also asked to update the commodity dissection of revenue and the breakdown of expense items for the computer services industry.

RESPONSE

6. Response to this year's questionnaire was very good, with most countries providing updating material.

7. However, many countries were able to provide only partial (or no) responses in respect of some industries, or failed to provide comparable data for the total economy. A particular stumbling block was the change to value added, with a number of countries unable to provide the data at the industry level or not able to provide value added for the total economy for the comparable year. In some instances turnover has been used as a proxy and the tables are suitably footnoted.

8. An area of the response that was particularly useful in understanding the data supplied was the extensive comments supplied with the data. Unfortunately, such comments cannot be readily summarised into meaningful tables. However, they provide a very useful insight into the difficulties associated with attempting to undertake international comparisons. The major issue arising is the varied (and presumably at times conflicting) data sources used in providing estimates for the items of interest, both in respect of the particular industry and the economy as a whole. The main areas were:

- . the use of business registers as the source of number of businesses, as against estimates derived from surveys of the industry.
- . the use of data from household based labour force collections, as against estimates derived from surveys of the industry
- . the differing concepts of industry and the differing coverage of the industries
- . the differing concepts of the data items sought eg whether 'businesses' relate to establishments or enterprises.

9. These comments largely reinforce the observations in last year's paper that the use of alternative data sources makes interpretation of the data difficult and caution needs to be exercised in doing so. These concerns are further reinforced by the significant changes (in terms of proportions) in the data reported this year when compared with last year. In a number of cases it would appear that different sources have been used for the data compared with last year, resulting in quite large differences in the data for some countries.

10. Statistics for each of the industries are summarised in the attached tables 1-6. Where countries had no data to report or there were insufficient data to form ratios for the variables of interest, they have been excluded from the table for that industry. In some instances countries have reported data which appear to be irreconcilable with previously reported data; such cases have been flagged as 'n.a.' at this

stage. Where, having examined the attached tables, countries have detected any apparent errors, or now have additional data to supplement the information in the tables, it would be appreciated if such data could be forwarded for inclusion in the final paper.

11. As there was not a great deal of new information provided on the income and expense items for the computer services industry, it has not been included in this paper.

RESULTS

12. As was the case last year, the list of countries in the attached tables has been presented in alphabetic order. Total employment has been rounded to the nearest thousand; hence a zero figure indicates a number less than five hundred. Share of the economy for each of the variables has been rounded to 1 decimal point; hence a zero figure indicates a share of the total economy for the particular variable of less than 0.05%.

Telecommunications Industry (Table 1)

13. The data for the telecommunications industry show that for all countries the percentage share of number of businesses is very small, with most countries being 0.1% or less. The exception was the United States, where businesses in the telecommunications industry represent 0.5% of all businesses in the economy.

14. Excluding France (see later comment), in terms of employment the industry's proportion of total employment ranged from 0.6% in the Czech Republic and Japan to 1.5% in Finland, while for both Hong Kong and New Zealand it was 1.4%. For all countries the percentage share of total employment was significantly larger than the percentage for number of businesses. As noted in previous years, the telecommunications industry is quite often dominated by government organisations, which would account for the low incidence of businesses and the high level of employment. It also potentially provides a source of inconsistency in reporting, as evidenced in the table, where France appears to have a small telecommunications industry. However, this is due to the fact that the data provided relate only to private sector businesses. It is not clear if any other countries have reported only for private sector businesses.

15. Value added as a percentage of the total economy could not be derived for Japan, Switzerland and United States. For the remaining countries (excluding France) the value added percentages ranged from a high of 3.3% in New Zealand to 0.4% in the Czech Republic. Canada had a similarly low proportion (0.5%) for value added.

Audio-visual Industry (Table 2)

16. For the audio-visual industry, a number of countries were unable to provide any data. Japan, the Netherlands, Switzerland and United States did not provide the necessary value added data to enable proportions to be derived.

17. The figures reported for the audio-visual industry show that this industry, in the main, is smaller in size, in terms of employment and value added, than the other industries being examined. The exception is Canada, where the value added is quite significant. As noted in the comments provided by Canada, this may be explained in part by the fact that it includes relay systems for radio and TV broadcasters.

18. Data on the percentage share of the number of businesses varied considerably, though for most countries it was in the range of 0.1% to 0.3%. The exceptions were the Netherlands (0.9%), Hong Kong (0.8%) and the United States (0.5%).

19. The proportions derived for employment, for those countries reporting the data, are also relatively consistent, with most countries falling within the range of 0.1% to 0.4%. The exceptions were Hong Kong (0.7%), Finland (0.7%) and the USA (0.6%).

20. The value added data are also relatively consistent and in line with the proportions of businesses and employment, with the above noted exception of Canada where the industry represents 2.2% of the total economy.

Insurance Industry (Table 3)

21. Reporting for the insurance industry was similar to that for other industries, with a number of countries having no data to report, while others could only report some items of interest.

22. In terms of the percentage share of the number of businesses, New Zealand (1.0%) was the highest followed by Japan (0.7%), with the share for most of the remaining countries being less than 0.5%.

23. The data for employment showed greater consistency across the countries, with the majority falling in the range of 0.7% to 1.1% of total employment. Only the Czech Republic (0.2%) and Sweden (0.6%) were below this range, while Switzerland (2.2%), Japan (1.8%) and United States (1.6%) were above it.

24. Only 5 countries were able to report value added for the insurance industry. The proportions as a share of the total economy ranged from 0.4% for the Czech Republic to 0.9% for Sweden and New Zealand.

Computer Services Industry (Table 4)

25. Data on number of businesses, total employment and value added were available for virtually all countries, however, shares of the total economy for value added were not available for Japan, the Netherlands, Switzerland and United States.

26. In terms of the percentage share of number of businesses, the majority of countries fell in the range of 0.8% to 1.5%. Only Hong Kong (0.6%) and Japan (0.3%) were less than this range while the Netherlands (1.8%) exceeded it.

27. For employment, the computer services industry's share in the majority of countries was in the range 0.4% to 0.9%. The only exceptions to this were Hong Kong with only 0.3%, and Finland and Japan which for both, the computer services industry accounted for 1.4% of employment. The employment share for Japan provides an interesting contrast to the share of the number of businesses, where as noted above Japan has the lowest proportion (0.3%). In further contrast, in the Netherlands the industry accounts for 1.8% of businesses yet generates only 0.7% of employment.

28. In relation to value added there is greater consistency in percentages for the countries reporting the data, with the majority falling in the range of 0.9% (Australia, Czech Republic, Finland, and France) to 1.1% (Sweden). Canada (0.5%) and Hong Kong (0.2%) were the only countries outside this range.

Hotels Restaurants and Cafes (Table 5)

29. As with Computer services, virtually all countries were able to report data for the HORECA industries. Shares of the total economy for value added were not available for Japan, the Netherlands and the United States.

30. The HORECA industries are clearly a significant component of most countries' economies. The percentage share of the number of businesses varied considerably, from 3.3% in Sweden to 14.3% in Japan. The majority of countries fall in the range 5.7% to 8.3%.

31. In relation to employment, again there was significant variation. For the Czech Republic the HORECA industries accounted for only 0.1% of employment; the next lowest was Sweden with 2.0%, followed by the Netherlands with 2.9%. At the other end of the scale the HORECA industries accounted for over 10% of employment in Japan (10.3%) and Hong Kong (10.3%). The next highest after these was the United States (8.6%).

32. Again Hong Kong and Japan provide interesting contrasts. In the case of Hong Kong 10.6% of employment was generated by businesses representing only 4.3% of the business population. In Japan 10.3% of employment was provided by businesses accounting for 14.3% of all businesses.

33. In relation to value added there is greater consistency in percentages for the countries reporting the data. Hong Kong (3.8%) had the highest proportion, while both Switzerland (3.4%) and Australia (3.2%) exceeded 3 per cent. Of those countries reporting the data only Sweden (1.0%) and the Czech Republic (0.8%) reported a share of 1 percent or less.

Legal and Accounting Industries (Table 6)

34. Again most countries were able to report data for this industry sector. Data on number of businesses and total employment were available for virtually all countries, but shares of the total economy for value added could not be derived for Canada, Japan, the Netherlands, Switzerland and United States.

35. In terms of the percentage share of the number of businesses the majority of countries fell in the range 1.5% to 2.5%. Only Japan (0.8%) and Hong Kong (1.0%) were less than this range, while Australia (3.0%) and United States (3.9%) were the only countries to exceed it.

36. In terms of share of total employment, the majority of countries were in the range 0.6% to 1.2%. Japan (0.5%) was the only country below this range, while Australia (1.6%), the United States (1.8%) and the Netherlands (2.1%) were above it.

37. For those countries reporting value added, most had proportions around the 1.0% mark. The notable exceptions were Finland (0.3%), for which the share is in fact based on turnover (see footnote (c) of table), and Australia for which the industry's share of the economy's value added is estimated at 3.1%.

CONCLUSIONS

38. In spite of the efforts this year to ensure greater consistency in reporting by countries there clearly is, based on the comments received, considerable variation in the basis of reporting.

39. As noted earlier, this year's exercise has been beneficial primarily due to the extensive comments received from participants explaining what data sources were used, industry differences etc. However, as also previously noted, such information cannot be readily tabulated, nor used to standardise reporting by countries to a more comparable basis.

40. Given these constraints, it is obvious that caution needs to be exercised in interpreting the data in the attached tables.

41. Australia is prepared to continue with the preparation of these comparative tables and to continue attempts to improve the comparability of the data if it is considered by participants to be of value. Alternatively there may be some value in pursuing more detailed intercountry comparisons at the individual industry level. For example most countries were able to provide data for the HORECA industries and for the legal and accounting industry, and a more detailed study of these industries may be more informative than the broad comparisons provided again this year.

Table 1: Intercountry Comparisons - Telecommunications Industry

	Telecommunications Industry (ISIC 6420)			Ratio Telecommunications Industry to Total Economy (per cent)		
	No of Businesses Number	Employment (000)	Value Added (millions)	No of Businesses per cent	Employment per cent	Value Added per cent
Canada (1992)(a)	861	111	2,917	0.1	0.9	0.5
Czech Republic (1993)(b)	n.a.	30	3	n.a.	0.6	0.4
Finland (1993)(c)	95	16	9,267	0.1	1.5	1.1
France (1993)	300	10	7,117	0.0	0.0	0.1
Hong Kong (1993)	567	34	18,058	0.2	1.4	2.1
Japan (1991)(d)	5,000	258	5,446,143	0.1	0.6	n.a.
New Zealand (1990-91)	555	16	2,384	0.3	1.4	3.3
Sweden (1993)	178	39	27,578	0.0	1.1	2.1
Switzerland (1991)	8	20	n.a.	0.0	0.7	n.a.
United States (1992)(e)	29,700	1,063	200,080	0.5	1.1	n.a.

(a) Value added relates to 1991

(b) Value added relates to 1992

(c) Value added not available, turnover used instead

(d) Estimates for total economy based on 1991 data

(e) Estimates for total economy based on 1991 data, value added not available, receipts used instead.

Table 2: Intercountry Comparisons - Audio Visual Industry

	Audio Visual Industry (ISIC 9211,9212,9213)			Ratio Audio Visual Industry to Total Economy		
	No of Businesses Number	Employment (000)	Value Added (millions)	No of Businesses per cent	Employment per cent	Value Added per cent
Canada (1992)(a)	2272	48	13303	0.2	0.4	2.2
Czech Republic (1993)(b)	n.a	4	1	n.a	0.1	0.1
Finland (1993)(c)	n.a	7	3,593	n.a	0.7	0.4
France (1993)	5,200	61	34,950	0.2	0.3	0.5
Hong Kong (1993)	2,177	18	3,531	0.8	0.7	0.4
Japan (1991)(d)	5,000	104	909,410	0.1	0.2	n.a
Netherlands (1993)	5,400	14	n.a	0.9	0.3	n.a
Sweden (1993)	1,467	11	3,436	0.3	0.3	0.3
Switzerland (1991)	688	2	n.a	0.2	0.1	n.a
United States (1992)(e)	28,400	576	67,107	0.5	0.6	n.a

(a) Value added relates to 1991

(b) Value added relates to 1992

(c) Value added not available, turnover used instead

(d) Estimates for total economy based on 1991 data

(e) estimates for total economy based on 1991 data; value added data not available, receipts used instead.

Table 3: Intercountry Comparisons - Insurance Industry

	Insurance Industry (ISIC 6601, 6602, 6603)			Ratio Insurance Industry to Total Economy (per cent)		
	No of Businesses	Employment	Value Added	No of Businesses	Employment	Value Added
	Number	(000)	(millions)	per cent	per cent	per cent
Canada (1992)(a)	1,486	85	2,971	0.1	0.7	0.5
Czech Republic (1993)(b)	n.a.	11	3	n.a.	0.2	0.4
Finland (1993)	169	11	n.a.	0.1	1.1	n.a.
France (1993)	600	156	42,449	0.0	0.7	0.6
Hong Kong (1993)	172	19	n.a.	0.1	0.8	n.a.
Japan (1991)(c)	44,000	644	n.a.	0.7	1.8	n.a.
New Zealand (1990-91)	1,898	10	665	1.0	0.8	0.9
Netherlands (1993)	2,200	53	7,077	0.3	1.0	n.a.
Sweden (1993)	352	22	11,339	0.1	0.6	0.9
Switzerland (1991)	1,007	63	n.a.	0.4	2.2	n.a.
United States (1992)(d)	39,000	1,517	796,025	0.6	1.6	n.a.

(a) Value added relates to 1991

(b) Value added relates to 1992

(c) Estimates for total economy based on 1991 data

(d) Estimates for total economy based on 1991 data, value added not available, receipts used instead

Table 4: Intercountry Comparisons - Computer Services Industry

	Computer Services Industry (ISIC subdiv 72)			Ratio Computer Services Industry to Total Economy (per cent)		
	No of Businesses	Employment (000)	Value Added (million)	No of Businesses	Employment (000)	Value Added (million)
	Number	(000)	(millions)	per cent	per cent	per cent
Australia (1993)	4,894	30	1,826	0.8	0.4	0.9
Canada (1992)(a)	12,000	67	3,188	0.9	0.5	0.5
Czech Republic (1993)(b)	n.a	23	7	n.a	0.5	0.9
Finland (1993)(c)	1,000	14	7,586	0.9	1.4	0.9
France (1993)	21,200	183	59,876	0.9	0.8	0.9
Hong Kong (1993)	1,791	8	1,641	0.6	0.3	0.2
Japan (1991)(d)	20,000	657	2,458,102	0.3	1.4	n.a.
Netherlands (1993)	11,500	40	4,098	1.8	0.7	n.a.
Sweden (1993)	7,607	32	13,873	1.5	0.9	1.1
Switzerland (1991)	4,258	21	n.a.	1.5	0.7	n.a.
United States (1992)(e)	59,100	886	101,038	1.0	0.9	n.a.

(a) Value added relates to 1991

(b) Value added relates to 1992

(c) Value added not available, turnover used instead.

(d) Estimates for total economy based on 1991 data

(e) Estimates for total economy based on 1991 data, value added not available, receipts used instead.

Table 5: Intercountry Comparisons - HORECA Industries

	HORECA Industry (ISIC 5510, 5520)			Ratio HORECA Industry to Total Economy (per cent)		
	No of Businesses	Employment	Value Added	No of Businesses	Employment	Value Added
	Number	(000)	(millions)	per cent	per cent	per cent
Australia (1992)	21,213	329	6,316	3.9	4.3	3.2
Canada (1992)(a)	63,006	763	14,599	4.5	5.9	2.5
Czech Republic (1993)(b)	n.a.	4	6	n.a.	0.1	0.8
Finland (1993)(c)	7,000	38	16,155	6.0	3.7	2.0
France (1993)	164,500	704	107,088	7.1	3.2	1.6
Hong Kong (1993)	12,274	263	33,273	4.3	10.6	3.8
Japan (1991)(d)	941,000	4,734	n.a.	14.3	10.3	n.a.
New Zealand (1990-91)	10,697	54	1,314	5.7	4.7	1.8
Netherlands (1993)	41,800	160	11,559	6.6	2.9	n.a.
Sweden (1993)	16,512	68	13,555	3.3	2.0	1.0
Switzerland (1991)	23,416	171	11,255	8.3	5.9	3.4
United States (1992)(e)	487,400	8,068	266,057	7.9	8.6	n.a.

(a) Value added relates to 1991

(b) Value added relates to 1992

(c) Value added not available, turnover used instead

(d) Estimates for total economy based on 1991 data.

(e) Estimates for total economy based on 1991 data, value added not available, receipts used instead.

Table 6: Intercountry Comparisons - Legal and Accounting Industry

	Legal & Accounting Industries (ISIC 7411, 7412)			Ratio Legal & Accounting Industries to Total Economy (per cent)		
	No of Businesses Number	Employment (000)	Value Added (millions)	No of Businesses per cent	Employment per cent	Value Added per cent
Australia (1993)	17,549	123	6,436	3.0	1.6	3.1
Canada (1992)(a)	20,628	101	n.a.	1.5	0.8	n.a.
Czech Republic (1993)(b)	n.a.	31	7	n.a.	0.6	1.0
Finland (1993)(c)	2,000	7	2,700	1.7	0.7	0.3
France (1993)	39,300	250	76,522	1.7	1.1	1.2
Hong Kong (1993)	2,821	27	9,865	1.0	1.1	1.1
Japan (1991)(d)	54,000	231	493,666	0.8	0.5	n.a.
Netherlands (1993)	15,700	113	11,000	2.5	2.1	n.a.
Sweden (1993)	11,703	29	10,018	2.4	0.8	0.8
Switzerland (1991)	6,383	34	n.a.	2.3	1.2	n.a.
United States (1992)(e)	240,500	1,694	140,256	3.9	1.8	n.a.

(a) Value added relates to 1991

(b) Value added relates to 1992

(c) Value added not available, turnover used instead

(d) Estimates for total economy based on 1991 data.

(e) Estimates for total economy based on 1991 data, value added not available, receipts used instead