VOORBURG GROUP ON SERVICE STATISTICS

Eighth Meeting
2nd Session

Oslo, 27 September-1 October 1993

Paper to be presented by George Sarossy

THE COMPOSITION AND STRUCTURE OF THE TELECOMMUNICATIONS, AUDIO-VISUAL, INSURANCE AND COMPUTER SERVICES INDUSTRIES IN VOORBURG GROUP MEMBER COUNTRIES

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THE COMPOSITION AND STRUCTURE OF THE TELECOMMUNICATIONS, AUDIO-VISUAL, INSURANCE AND COMPUTER SERVICES INDUSTRIES IN VOORBURG GROUP MEMBER COUNTRIES

1. At the 1992 Voorburg Group Meeting, Australia agreed to revise the statistics produced for the computer services industry in its 1992 paper. It also agreed to summarise available data on the telecommunications, audio-visual and insurance industries. This paper meets that commitment.

Methodology

2. Each member country was asked to review and revise the computer services industry data it provided for the 1992 paper. If data for the computer services had not previously been supplied they were asked to complete a proforma on the size of the industry, a commodity dissection of revenue and a breakdown of expense items. In addition they were asked to provide summary data on the size of the other industries along similar lines to the computer services industry proforma.

3. It was decided to only collect summary data about the telecommunications, audio-visual and insurance industries as it was felt that few, if any, countries would be able to provide a sufficiently detailed breakdown of revenue and expenses for them. The computer services revenue and expense breakdowns were retained as the model survey for this industry has been developed further than those for the other industries.

Response

4. At the time of writing, responses have been received from Australia, Canada, Czech Republic, Denmark, Finland, France, Great Britain, Japan, Norway, Sweden and the United States. Countries who supplied data for the computer services paper last year and have been included in the computer services tables are New Zealand, Mexico, Germany and the Netherlands. Statistics from these responses are summarised in the attached tables.

5. It was expected that not all countries would be able to provide data, and in some cases only partial responses could be made. This is because of the different stages of development of the industry surveys in member countries.

6. Those countries that have data which could be used to supplement the information in the attached tables are asked to supply it at the Oslo meeting.

Results

General Comments

7. Employment was asked to be split into numbers of both full and part time employees. As only four countries were able to provide this employment split, and in those responses the incidence of part time employment was only small, it was decided to not include those figures on the tables.

8. An examination of the statistics in the attached tables leads one to the conclusion that there is likely to be some definitional, scope and coverage differences between countries. For example some countries include both incorporated and unincorporated businesses in their figures whereas others will only include incorporated businesses. It is also not certain that all countries included government enterprises in their figures. The non-inclusion of such enterprises could cause a significant understating of employment and revenue, particularly in some industries.

9. The possibility of different scope and coverage practices across countries makes it difficult to be certain that the difference in the statistics for countries is a true reflection of real differences.

10. This leads one to the conclusion that there is a need for more comprehensive guidelines for the conduct of surveys of businesses within these industries. This would improve the comparability of that data which is available and may provide the impetus for more collection activity around the world.

Telecommunications Industry (Table 1)

11. There was a lot of data available on the telecommunications industry in the countries which responded. Most countries were able to supply the percentage shares of number of businesses, employment and revenue. Norway could not supply business numbers, the United States and Japan revenue share.

12. The countries are ordered based on the percentage share of employment of the industry across the total economy. The Czech Republic, Finland and the United States all reported a percentage share of greater than 1.4% of total employment. All countries reported that the percentage share of employment was significantly larger than the figure for number of businesses, particularly in the Czech Republic where it is only the one business that provides all the 1.6% of employment.

13. In all countries, the percentage share of number of businesses is very small, ranging from virtually 0.0% in

the Czech Republic, Australia and Finland to 0.5% in the United States. The percentage share of number of businesses in the United States was more than twice as great as the other countries.

14. Conversely, as mentioned previously, the percentage shares of employment and also revenue are relatively large, 0.6 to 1.6, and 0.4 to 1.6 respectively. Apart from Japan and United States, all countries reported the percentage share of revenue for this industry across the economy, although the United States did provide revenue generated by the industry. All revenues reported were above 1.0% except for Great Britain.

15. In every country which responded, of the four industries, the telecommunications industry has the smallest percentage share of numbers of businesses. Yet, of all countries, except the Czech Republic and Australia, it has the largest percentage share of revenue, and in all but three countries (United States, Canada and Japan), the highest percentage of employment.

16. The fact that in many countries the telecommunications industry is quite often dominated by government organisations may account for the low incidence of businesses and the high level of employment and generated revenue reported. However the major difficulty with analysing the data in this table is likely to be in the scope, coverage and definitional differences in the data reported.

Audio-visual Industry (Table 2)

17. There was less data provided for the audio-visual industry. Australia was able to provide no data at all, while Norway could only supply revenue figures.

18. The figures reported in the audio-visual industry show that this industry is smaller in size than the other industries being examined. The largest percentage share of employment was in Great Britain, Canada and Finland, which reported 0.6% of total employment in this industry. This figure is equivalent to the lowest figure reported in the telecommunications industry.

19. Revenue figures supplied ranged from 0.03% of total revenue in Norway to 0.7% in Canada. All the percentages reported were below those for the telecommunications industry.

20. The table also shows that although the audio-visual industry in Great Britain shows the greatest percentage share of businesses and employment, the industry's percentage share of revenue is one of the lowest.

21. Australia was unable to provide data for the audio-visual industry because under its industry

classification, the audio-visual industry (ISIC 9211-9213) was included with figures for Recreation, Personal and Other Services. Under ANZSIC, the new Australian and New Zealand industry classification, the audio-visual industry is classified separately which will facilitate the provision of figures for this industry in the future.

Insurance Industry (Table 3)

22. Although most countries could supply figures on employment and number of businesses in this industry, only four countries were able to report the revenue generated. Only France were unable to provide any data on any segment of the industry. Countries are again ordered based on the employment share of the industry. The United States reported significantly larger percentage shares for both number of businesses and employment numbers, even though Japan, Canada, Finland and Australia all reported employment percentages over 1.0%.

23. There were further variations in the percentage shares of and between number of businesses and employment. Employment numbers ranged from 0.5% in Great Britain to 2.3% in the United States, while the number of businesses ranged from 0.0% (29 businesses) in the Czech Republic, and 0.1% in Canada, Sweden and Finland up to 2.5% in the United States. While the percentage share of number of businesses was greater than that of employment in the United States, the opposite was the case in all other countries. The percentage share for employment for the other countries being significantly higher, up to 14 times in Canada, than for number of businesses.

24. Five countries, United States, Japan, Finland, Denmark Great Britain and France were unable to provide revenue figures for this industry. Of these countries, four were among the largest six in their percentage share of employment. The revenue figures which were reported ranged from 0.6 in Sweden to 1.6 in Australia.

Computer Services Industry (Table 4)

25. This shows the size of the computer services industry in fourteen different countries. Those countries that answered the proforma for last year's Voorburg paper have had their figures repeated here. Again the percentage share of employment is the basis of the ordering on the table.

26. Japan and Finland have the largest percentage share of employment, the industry in both countries being over 1.1% of total employment. On the other hand, the computer services industry in Mexico only provided 0.05% of total employment.

27. There are large variations in the various measures used to gauge the size of the industry. The percentage share of businesses, range from 0.02% in Mexico to 2.2% in Great Britain. The range of the employment percentages was also relatively large, 0.05% in Mexico to 1.3% in Japan.

28. On the other hand, the percentage share of revenue was fairly similar across countries, ranging from 0.2% in Great Britain to 1.3% in the Czech Republic and Sweden. It is worth pointing out that in Great Britain, although containing 2.2% of all business, the computer services industry only generates 0.2% of revenue. If the Great Britain revenue figure is not included the range is then 0.4% to 1.0%.

29. The figures for Japan and Great Britain make an interesting comparison. In Japan the percentage of businesses in the computer services industry is only 0.3%, compared to in Great Britain, 2.2%. Yet the 0.3% of businesses in Japan provides employment for 1.3% of the economy's total employment, whereas in Great Britain 2.2% of businesses provides employment for only 0.5%.

30. Looking at the type and size of the variations in the reported data, it would appear that either the industry is very different in Great Britain compared to other countries, or that their data is compiled differently.

Computer services - commodity items (Table 5)

31. There was limited data available for the breakdown of revenue by commodity item in the computer services industry. Only those countries which have tested the model survey have been able to complete the table. Of the fourteen countries reporting summary data for the industry only eight could supply any figures on the revenue breakdown. Of these eight only Canada, Finland, France, New Zealand and Sweden could provide figures for the majority of CPC items along the lines of the model survey. As readers will be aware from the previous meetings, these countries have also used differing classifications in groupings of goods and services.

32. Canada was able to separately identify revenue for the majority of commodity items. However in the Canadian figures they have combined *systems and user tools software* and *application software*, and not collected separate data for *systems maintenance* and *other computer services*.

33. Finland, France and New Zealand can all furnish separate data for the majority of CPC categories. Finland do not collect individual data for *other professional computer services* and *other computing processing services*, and France for *programming services*,

while New Zealand combine *other computer services* with *revenues from other services*.

34. In their survey of the computer services industry, Sweden collect a different commodity dissection to the one outlined in the model survey. However, since last year's meeting they have modified the results they gained in a way that corresponds more closely with those in the model survey.

35. Both Japan and the United States, while collecting certain commodity breakdowns, collect data from categories more suitable to their own domestic situations. The United States combine *systems and user tools software*, *application software*, *custom software development* and *programming services*, while also collecting separate data on computer integrated systems design and computer rental and leasing. Japan combine all the professional computer services into one category.

36. Australia was unable to supply the requested breakdown. When last surveyed in 1987-88 the model survey had not yet been developed and, as such, an extensive commodity breakdown was not used. Australia will be surveying the computer services industry again in 1992-93 and will be able to provide a greater commodity dissection after that.

37. From the data that was gained it appears that in most countries, Canada being the exception, *data processing and tabulation services* is the most important commodity. *Custom software development* is significant in most countries and applications software is also reasonably important. In the United States *computer repair and maintenance* and *systems maintenance* are significant as is *computer integrated design*. *Systems and technical consulting* is especially significant in France. There is a significant amount included under *revenue from other sources* for each country except the United States.

Expense items (Table 6)

38. This shows the percentage share of total expenses for each expense item. Again percentages were thought to be the best way of showing the data.

39. This table shows that it was more difficult to compile these statistics than those in Table 5. Only Canada can supply figures for the majority of expense items included in the model survey. Most other countries collect only limited data on expense items, with many of the expense items in the model survey combined into single items. For example, Mexico could only separate wages and salaries, while Japan could separate wages and salaries and rental and leasing of machinery expenses.

The information provided by the other countries was similarly brief.

40. For those countries that have been able to provide data, there does appear to be some significant differences. For example the share of wages and salaries in Mexico, and to a lesser extent New Zealand and Japan, are much smaller than most other countries.

41. It is obvious that this part of the model survey needs to be the subject of more development work.

Conclusions

42. There are obvious differences in the data reported by participating countries. These differences are so marked that it seems reasonable to hypothesise that the differences must be at least partially due to methodological differences.

43. To identify real differences will require greater consistency of collection practices. This in turn implies the need for these practices to be documented and agreed upon. This would seem to relate particularly to scope, coverage and industry delineation issues.

44. Not only would this documentation lead to a set of more compatible international statistics, it would help those less statistically advanced countries to more quickly obtain compatible data.

45. Australia will be continuing its service industries surveys program for the next few years. For 1992-93 and 1993-94 it will concentrate on the professional and business services sector, including a fairly complete coverage of the information technology industry. It is willing to continue the analysis of participating countries data in these areas, hopefully leading to a more compatible set of international data.

46. Australia is also prepared to participate in the development of a set of guidelines for the conduct of surveys in these areas and would encourage other countries to do likewise. There must be a significant amount of knowledge on these topics in participating countries so the task should not be too daunting. Eurostat, in particular, has a set of statistical manuals which would provide an adequate starting point for the work.

September 1993

TABLE 1: SIZE OF TELECOMMUNICATIONS INDUSTRY

Country	No of businesses	total employment ('000)	Revenue Generated (millions)	Share of Total Economy(%)		
				No of bus	Employment	Revenue
Czech Republic	1	83	Kc 8,750	0.0	1.6	1.2
Finland	70	19	FIM 8715	0.0	1.5	1.0
United States	33,095	1274	$217,034	0.5	1.4	n.a
Australia	3	84	$A11,500	0.0	1.1	1.4
Great Britain	1,354	231	£15,089	0.07	1.0	0.4
Canada	347	125	$C 13,501	0.04	1.0	1.4
Sweden	120	42	SEK 32700	0.02	0.9	1.6
Norway	n.a	20	17534 kr	n.a	0.9	1.3
Denmark	486	23	DKR18,331	0.2	0.8	1.2
Japan	4,479	262	n.a	0.1	0.6	n.a
France	284	167	ff130,121	n.a	n.a	n.a

TABLE 2: SIZE OF AUDIO-VISUAL INDUSTRY

Country	No of businesses ('000)	Total employment ('000)	Revenue Generated (millions)	Share of Total Economy(%)		
				No of bus	Employment	Revenue
Great Britain	18	126	£9,102	1.1	0.6	0.2
Canada	4	74	SC 6,984	0.4	0.6	0.7
Finland	0.5	7	FIM 3419	0.3	0.6	0.4
United States	35	430	$41,055	0.6	0.5	n.a
Japan	6	109	n.a	0.1	0.3	n.a
Sweden	0.6	9	SEK 6100	0.1	0.3	0.3
Denmark	0.5	4	DKR1579	0.2	0.1	0.1
Czech Republic	0.5	3	Kc 1,175	0.1	0.1	0.0
Norway	n.a	n.a	470 kr	n.a	n.a	0.03
France	4	49	ff 56.068	n.a	n.a	n.a
Australia	n.a	n.a	n.a	n.a	n.a	n.a

TABLE 3: SIZE OF INSURANCE INDUSTRY

Country	No of businesses ('000)	Total employment ('000)	Revenue Generated (millions)	Share of Total Economy(%)		
				No of bus	Employment	Revenue
United States	154	2119	n.a	2.5	2.3	n.a
Japan	43	806	n.a	0.7	1.8	n.a
Canada	0.6	177	$C 10,313	0.1	1.4	1.1
Finland	0.2	15	n.a	0.1	1.1	n.a
Australia	6	80	$A14,995	0.7	1.0	1.6
Sweden	0.6	40	SEK13,053	0.1	1.0	0.6
Denmark	1	22	n.a	0.4	0.8	n.a
Czech Republic	0.02	37	Kc 5,914	0.0	0.7	0.8
Norway	n.a	14	9338 kr	n.a	0.6	0.7
Great Britain	n.a	103	n.a	n.a	0.5	n.a

TABLE 4: SIZE OF COMPUTER SERVICES INDUSTRY

Country	No of businesses ('000)	total Employment ('000)	Revenue Generated (millions)	Share of Total Economy(%)		
				No of bus	Employment	Revenue
Japan	19	604	68,752*	0.3	1.3	n.a
Finland	2	14	FIM 8,114	0.8	1.1	0.9
United States	40	773	$91,254	0.7	0.8	n.a
Great Britain	38	173	£9,085	2.2	0.8	0.2
Sweden	7	27	SEK 25236	1.4	0.7	1.3
Denmark	3	21	DKR15,449	0.9	0.7	1.0
New Zealand	2	8	$NZ 1,500	1.0	0.7	0.8
Netherlands	9	39	$FL 6,650	1.5	0.6	0.6
Canada	6	61	$C 5,520	0.7	0.5	0.6
Czech Republic	4	22	Kc 9,090	0.4	0.4	1.3
Norway	1	10	9,471 kr	n.a	0.4	0.7
Australia	4	24	$A 1,628	0.5	0.3	0.2
Mexico	0.3	3	P$168,788	0.02	0.05	n.a
France	20	168	ff 96,779	n.a	n.a	n.a
Germany	18	n.a	DM 22,413	0.9	n.a	0.4

* 100 million yen

TABLE 5: PERCENTAGE SHARE OF REVENUE BY COMMODITY ITEM - COMPUTER SERVICES

Commodity Item	Aust	Can	Fin	Fra	Jap	NZ	Swe	USA
Systems and user tools software	53	11	1	*	60	7	*	32a
Application software			6	7		5	2	a
Consultancy related to the installation of hardware		1	0	6		2	5	5
Systems and technical consulting		5	2	20		7	2	
Custom software development		10	15	12		9	24	a
Programming services		5	10	3		4	4	
Computer facilities management services		5	2	3		5	*	2
Systems maintenance		*	4	1		3	6	b
Other professional computer services		9	*	1	5	1	3	*
Data processing and tabulation services	25	8	28	19	16	27	18	20
Data entry services		2	1	4	3	1	5	
Other computing processing services		7	*	1	2	3		
Data base services	22	2	2	1	3	3	1	3
Computer repair and maintenance services		5	4	1	*	1	*	11b
Other computer services		*	3	1	*	24	3	24c
Revenues from other sources		31	23	21	13		24	4

a Included under *Systems and user tools software*
b Included under *Computer repair and maintenance services*
c Includes computer integrated systems design(13.2%), computer rental and leasing(5.1%)
* Figures for item not separately collected. Included elsewhere in figures.

TABLE 6: PERCENTAGE SHARE OF EXPENSES INCURRED - COMPUTER SERVICES

Expense Item	Aust	Can	Fin	Fr	Jap	Mex	NZ	Swe
Wages and salaries	37	46	39	40	33	22	28	
Employee benefits	4	3	*	16				39
Computer services for own use	*	3	*	*				
Professional services - legal, auditing, etc	*	2	*	*				
Advertising and sales promotion	*	4	*	*				
Insurance	-	-	12	*			c	
Rental and leasing of machinery	3	4	9	*	10			12
Telecommunication services		5	*	*			3	
Operating supplies	18		*	*				
Office and other supplies		4	15	*		78		12
Rental and leasing of land and buildings	3	6a	*	*				
Utilities	2		*	*				
Property and school taxes	-	a	*	3	b		c	34
Permits, licenses and other non-commodity indirect taxes	*		*					
Royalties and patent fees paid	1	*	*	1				
Services from related parties (not included above)	*	3	3	*				
Depreciation	5	a	8	6			8	
Other operating, administrative and general expenses	27	12	15	35	57b		62c	

a included under *rental and leasing of land and buildings*
b included under *other operating, administrative and general expenses*
c included under *other operating, administrative and general expenses*
* figures for item not separately collected. Included elsewhere in figures.