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INTERNATIONAL COMPARABILITY OF THE BUSINESS SERVICES

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ABSTRACT

The growth in business services has received big attention in recent years. Economists shows that the rise in services inputs represent a significant **trend in the organisation of production and as an important shift in the division of labour away industries**. With increases in international transactions, technological change, a lot of business services tend to increase more than proportionally : research, software, marketing, logistic, communication, advertising,... (for further details, see item [1],[2], [3] of the bibliography)

Only part of the growth of services sectors represents **actual increases** in the total volume of services performed. The rest is the **transfer of service functions** from firms and establishments primarily engaged in manufacturing and other product oriented activities to specialised service sectors. Thus far, evidence on the extent of transfer of functions is largely impressionistic if one refers to input-output coefficient (part 1) : ancillary activity is not recognised as separate activity in national accounts.

If we try to explain this reality, a functional approach is more significative (part 2). The concept of "**function**" is crucial here. It refers to the fact that functional approach use methods complementary to those of the central framework in order to measure sub-contracting of business services by function : the « facilities management » (restoration, cleaning, guarding), functions supports (legal services), information and communication (Computer services,telecommunication), keys functions (research).

Thus new technologies of information, storage, processing, and even technologies of research itself have been developed. A specialised service producer can take advantage of the **economies of scale** with new techniques of providing services and thus supply them at competitive advantage. At last despite the growing importance of services, **statistics in their field** are less well developed than those for the traditional «goods-producing» industries, such as agriculture, mining and manufacturing.

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CONTENT

I - NATIONAL ACCOUNTS APPROACH (DEMAND)

It is risky to make such comparisons without some precautions. We summarise here only the principal methodological aspects met. The coherent European data with the SEC 95 remain for the moment limited to the large aggregates such as the GDP, the GFCF or the final consumption household These data lead to certain changes with those coherent with the ESA 79, such as a raising of the GFCF because of integration of some immaterial assets, like **software**. On the other hand, research for own account is included in intermediate consumption.

It was thus necessary also to refer in the countries‘ tables, coherent with SNA 68 and ESA 79, of which the structures (such as the technical coefficients) should not be basically modified between the two systems. Indeed, almost all National Statistical Offices have an ongoing programme to compile national input-output tables in annual, or longer intervals, depending on the country. These tables are not generally collected by Eurostat. The detail of the information contained in these national tables may vary from country to country depending, namely, on the classifications used. Although some of them might not be harmonised and comparable across the Community (for instance I-O table symmetric or non symmetric), they can be of great benefit as they refer to more recent years.

Many countries compiled input-output table at producers’ price until 1995. It was necessary to have the same prices system in order to compare correctly, which is the purchasers’ price in SNA 93. Between the three price concepts exist the following connection :

purchasers’ price (including non-deductible value added tax)
- trade and transport margins
- non-deductible value added

= producers’ prices
- taxes linked to production (without value added taxes) less subsidies

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= basic prices.

So the transitions of I/O table from producers' price to purchasers’ price amounts to reallocating trade margins which is important if we want to compare the input-output coefficient of service sector, because it includes trade and transport : valuation at producers' price implies the trade margins are recorded as part of the product trade, while valuation at purchasers’ prices implies that trade margins are allocated to the products to which they

pertain. Moreover, we must deduct taxes (net subsidies) on product from output at producers' prices to pass at output at basic prices.

a) Business services classifications

The core of business services have normally six components in the classifications CPA (two digits) :

CPA 64 : post and telecommunications services
CPA 70: Real estate services (excluding dwelling services of owner-occupiers)
CPA 71: Renting services
CPA 72: Computer services
CPA 73: Research and development services
CPA 74: Other business services

Table 1

List of business services in the classifications (Reference CPA) *

6411000	Postal services
6412000	Courier services
6420000	Telecommunication services
7100000	Renting services of movable
7200000	Computer services
7300000	Research and development services by scientific institutions
7300100	Other research and development
7411000	Legal services
7412000	Economic advising agencies
7415000	Relief organisations
7420000	Technical services
7440000	Advertising agencies
7450000	Supply services of support personnel
7470000	Industrial cleaning services
7480100	Licenses; royalties
7480200	Lease and hire of agricultural quota
7490000	Miscellaneous business services

** This is a normal field. For the need of international comparisons of input-output coefficient of business services, we need to add financial intermediation services (CPA 65, 66, 67) and the real estate services (CPA 70) but withdraw on the other hand post and telecommunications services.*

This is clearly a diverse mix of services, particularly division 74, which includes services as heterogeneous as accounting, legal services, technical testing, cleaning, security and many others. It is in particular this division that CPA K is mostly identified with.

Many services in CPA K are produced largely for intermediate consumption. The following table shows the contribution of each service to GDP at market prices from the expenditure side. It is calculated as total final demand minus imports as a percentage of GDP (if imports are larger than final demand the contribution will be negative). For CPA 71, similarly, only renting by households (and some exports) add to GDP on the expenditure side, which is in this case a small fraction of total output. R&D output (CPA 73) is either exported (market output only) or collectively consumed (non-market output). By convention, R&D output is never gross fixed capital formation. Largest contributors within CPA 74 are often legal services and architects and engineering, since part of the output of these services is included in gross fixed capital formation (costs of transfer or property). Within CPA 74 there might be a small share of non-market output (e.g. in employment services or technical testing).

Although every attempt was made to collect the best comparable data for this table, is should be stressed that the differences between countries may reflect institutional and definitional differences rather than economic.

Table 2

Real Estate , Renting and business Services: Contribution to GDP from the expenditure side, 95

		Denmark	Spain	Belgium	Netherland	UK	France
71	Renting of machinery and of personal	0,2	0,3	0,2	0,3	0,9	0,2
73	Research and development	0,2	0,1	0,4	0,5	0,1	0,7
74	Other business activities	1,3	1,5	1,6	2,5	2,1	2,5
74.1	Legal, accounting, auditing, tax consultancy	0,3	0,9	0,8	0,8	0,6	1,0
74.2+74.3	Architects, engineers, technical testing	0,7	0,8	0,5	1,2	0,7	1,3
74.4	Advertising services	0,0	-0,1	0,0	-0,2	0,0	0,0
74.6	Investigation and security activities	0,0	0,0	0,0	0,0		
74.7	Industrial cleaning services	0,1	0,0	0,1	0,1		
74.5+74.8	Other business services	0,2	-0,2	0,1	0,6	0,8	0,2
	Total	**1.9**	**1.9**	**2.1**	**3.3**	**3.2**	**3.4**

Source : EUROSTAT-2000 in percentage [4]

b) difficulties in defining output of business services

CPA K covers a broad range of services. One characteristic that most of these services have in common is that the service provided is basically one of «knowledge». A lawyer, for example, can sell his services to others because he possesses specialised knowledge that is useful to other people. The product of the lawyer is the application of this knowledge to the specific case at hand. The same holds for e.g. accountants, architects, engineers, management consultants, real estate agents, researchers, etc. The intrinsic difficulty of

defining these services is that this knowledge cannot be quantified or valued. For each produced service different knowledge can be used. Due to these difficulties, and despite the growing importance of services, statistics in the field covered by CPA K are less well developed than those for the traditional «goods-producing» industries, such as agriculture, mining and manufacturing. Generally it is possible to directly measure the output of a large part of the services industries in current price terms through statistical questionnaires. It is however not straightforward to identify the individual products of the services industries. This is reflected in the poor development of the product classifications for (business) services.

The most difficult part of CPA K in terms of defining the output is division 73 Research and Development (R&D). A significant part of R&D consists of non-market services, which suffer from well-documented problems regarding the measurement of output. Even though part of research and development is carried out under contract it is still virtually impossible to identify the output because of the nature of R&D.

Within CPA K, due to the characteristics of these services, many products are unique; i.e. they are only produced once. Unique products cannot be priced in the traditional manner used for price indices such as the CPI because there is no identical product available to price from one period to the next. The unique nature of these products adds to the difficulty involved in defining outputs because so many of the projects are one-off and with no directly identifiable output. For example, a report on how to restructure a major enterprise may be the final output of a management consultant's contract. However, each project of this nature is likely to be different because of the broad range of problems underlying a decision to restructure a business. In addition, it is not sensible to base the volume of such work on the basis of the number of reports (or the number of pages of reports) because the output is the advice passed on to the managers of the business rather than the report itself. An approach to pricing which has proven satisfactory in the area of unique goods is to set up a model (e.g. a standard accountancy contract) for which price quotes are obtained in each.

Quality is an important issue in measuring outputs because changes in quality must be reflected in the volumes rather than in the price deflators. Again, the nature of many services in CPA K imply that their characteristics change frequently (the case of unique products is the extreme example of this). Even if it is possible to identify outputs in a number of cases, as well as to identify that quality changes have occurred, it is still more difficult to satisfactorily quantify their effects. An example would be criminal court cases handled by lawyers. It is possible to identify an output indicator simply by counting the number of court cases classified by type of case. However, the complexity of such cases and the quality of the lawyers' work in court make it impossible to measure the quality. In such cases, the quality issues related to the identified output (quantity) indicators are so marked that it is not possible to define the outputs in a way which makes them useful in obtaining volume estimates in the national accounts.

c) intermediate consumption structure of business services in different countries

Table 3 presents input-output coefficient by whole product of the whole economy and the share of intermediate consumption by product of the whole economy in different countries (year 1992 to 1997).

Total input-output coefficient are similar in the different countries, near than 48%. On the other hand, one can observe that input-output coefficient of the business services varies from 15% in United Kingdom and in United States to 9% in Spain (14% in France and Germany). Anglo-Saxons are thus the most advanced. But it is necessary to relatives these conclusions more closely by studying the various types of services (part 3).

The service sector to be analysed here include trade and transport, finance and insurance, real estate and rental, business and personal service and hotels, automobile repairs, research and entertainment, education, health and public administration.

Row « Business services » include here finance and insurance (CPA 65, 66, 67), real estate and rental (CPA 70), others business services (CPA 71 to 74).

This variation is explain by the business services more or less internal or external with the companies.

d) intermediate consumption structure of business services in different industries

Divergence are linked to statistical reasons but also to effects of structure.

For example, the use of services by branches of energy vary according to countries' because of importance of nuclear energy where some services like research are important inputs (table 4). In France, the use is thus higher than in the other countries of Europe [5].

In Hotel and restaurant or construction, input-output coefficient of services varies according the concentration degree of enterprises.

Moreover the largest services coefficients are for inputs of services in other services. Relatively large amounts of services are required to deliver the final demand for services and transportation itself. That is because establishments delivering services to final demand

purchase appreciable amounts of services from establishments in their own and other services industries.

Table 3

Structure of intermediate consumptions by product in different countries in percentage (1995)

	France	Nether. -Lands	Allem.	Italy	Spain	Danem.	United Kingdom	Europe Union	Canad.	United States
Products of agriculture	4.4	6.5	3.0	4.1	6.5	6.7	2.3	5.0	3.4	3.5
Forestry	0.3	0.1	0.5	0.1	0.3	0.2	0.1	0.0	0.3	0.3
Hunting	0.1	0.0	0.0	0.0	0.3	0.5	0.1	0.0	2.0	0.7
Food products, beverages and tobacco	4.8	6.1	4.0	4.9	8.6	6.3	4.2	5.0	3.5	3.5
Wearing apparel, furs	0.7	0.3	0.3	0.6	0.3	0.2	0.2	0.4	0.2	0.4
Leather and leather products	0.2	0.2	0.1	0.8	0.9	0.2	0.2	0.4	0.1	0.1
Printed matter and recorded media	2.9	2.5	3.0	1.7	1.7	2.6	2.7	3.0	2.4	1.4
Furniture; other manufactured goods n.e.c.	0.9	0.9	0.7	0.9	0.7	0.7	1.3	1.2	1.3	1.1
Motor vehicules, trailers and semi-trailers	2.9	1.4	2.6	1.2	3.6	1.0	2.1	2.0	7.2	2.1
Other transport equipment	1.3	0.6	1.2	0.9	0.5	0.3	1.2	0.9	0.0	0.5
Machinery and equipment n.e.c.	3.0	2.8	3.8	3.9	2.4	3.2	2.3	2.6	1.9	3.2
Office machinery and computers	0.8	0.8	0.4	0.1	0.3	0.3	1.1	0.3	4.3	0.8
Electrical machinery and apparatus n.e.c.	0.6	1.7	2.1	0.7	1.8	2.0	1.1	0.3	0.0	1.5
Radio, television an communication equip.	2.1	1.1	2.1	2.3	0.4	1.3	2.0	3.1	0.0	3.0
Medical, precision and optical instruments	1.4	0.6	0.8	0.3	0.3	0.8	0.9	0.2	0.0	0.6
Other mining and quarrying products	0.7	0.9	1.2	0.7	1.4	0.8	0.9	0.5	2.5	0.8
Other non-metallic mineral products	2.2	2.3	3.2	3.4	3.6	2.3	1.6	3.3	1.2	1.6
Textiles	1.4	0.8	1.1	2.9	1.7	0.9	1.2	1.2	1.2	1.2
Wood and products of wood and cork	1.2	1.3	1.1	1.7	1.7	2.3	0.9	0.5	1.7	2.2
Pulp, paper and paper products	2.3	2.5	1.8	1.9	2.6	2.5	2.0	2.4	2.5	2.7
Chemicals products and man-made fibres	5.6	5.6	5.9	6.4	5.7	4.3	4.8	6.0	4.7	4.7
Rubber and plastics products	2.5	2.0	2.6	2.2	2.6	2.4	2.5	2.7	2.0	2.7
Basic metals	3.7	2.9	4.7	4.2	4.2	2.8	3.0	4.2	5.5	3.9
Fabricated metals products	3.0	3.1	3.3	3.6	4.1	3.9	2.0	4.0	2.0	2.5
Coke, petroleum and nuclear fuel	4.3	6.5	3.2	5.6	3.3	4.1	4.5	4.7	4.6	5.1
Electrical energy, gas, steam	2.5	3.3	3.0	2.9	3.2	1.8	3.7	4.0	0.0	2.9
Water	0.4	0.2	0.4	0.2	0.4	0.1	0.2	0.3	2.7	0.4
Construction work	3.6	6.4	3.8	3.9	6.4	4.2	5.5	2.7	2.1	3.6
Trade and repair	1.0	0.9	1.0	2.4	2.9	1.4	1.4	1.0	0.9	1.6
Transport services	3.5	2.2	2.7	4.2	4.0	7.4	4.2	3.1	3.0	3.3
Post and telecommunications services	2.4	2.3	1.6	1.8	1.8	2.7	3.7	1.8	3.1	2.2
Business services inc. finance-real estate	29.8	25.6	30.3	23.7	18.5	23.5	31.0	30.4	29.8	31.1
Hotel and restaurant services	0.9	1.1	1.5	1.0	1.2	1.4	1.0	0.9	1.1	1.3
Other services n.e.c.	2.5	4.5	3.1	4.8	1.9	5.0	4.0	1.9	2.6	3.4
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
whose total services product	**40.1**	**36.6**	**40.2**	**37.8**	**30.3**	**41.4**	**45.4**	**39.1**	**40.5**	**42.9**

total input-ouput coefficient	*48.0*	*48.4*	*48.1*	*47.6*	*48.7*	*47.4*	*48.4*	*48.4*	*48.0*	*48.0*
services input-output coefficient	*19.2*	*17.7*	*19.4*	*18.0*	*14.8*	*19.6*	*22.0*	*18.9*	*19.5*	*20.6*
business services input-output coefficient	*14.3*	*12.4*	*14.6*	*11.3*	*9.0*	*11.1*	*15.0*	*14.7*	*14.3*	*14.9*

Source : INSEE, CBS, ISTAT, Statistic Canada, Statistiches Bundesamt, Danmarks statistics, EUROSTAT, ...

These near - diagonal purchases are not really general inputs but are more in the nature of semifinished goods or « part of components » : real estate bookers pay legal fees, advertising agencies rent or purchase the services of more specialised agencies or bill boards or broadcast media. This, somewhat larger inputs of services are required to deliver a big worth of the services than of most other subvectors of final demand. *In general, direct-plus-indirect requirements for a particular input tend to be large whenever that input is also one of the elements of final demand to be delivered*.

Thus, the most important relative users of services are financial intermediation services (IC about 70%). In a second group, we find market and non market services industries, and trade (40%), transport industries (25%). Among manufacturing industries, printing and publishing, chemical industries and electrical producers have the higher use (between 15 and 20%). On the other hand we find basic metal and agriculture (10%).

Table 4

Structure of intermediate consumption by business services in different countries in percentage

	France	Nether. -Lands	German	Italy	Spain	Danem.	United Kingdom	Europe Union	Canad.	United States
agriculture, hunting and forestry	7.3	10.5	8.5	4.2	2.2	10.3	11.7	7.1	21.8	13.9
Food products, beverages and tobacco	11.5	10.0	13.7	5.3	6.0	5.1	14.1	11.6	11.8	8.9
Wearing apparel, furs, leather and textile	13.9	10.4	10.8	7.6	7.0	4.4	14.9	12.9	10.3	9.3
Printed matter and recorded media, paper	16.0	20.0	17.3	12.0	6.4	8.6	14.7	15.1	14.9	12.6
Coke, petroleum and nuclear fuel	19.1	8.9	14.9	5.0	10.8	11.1	7.4	12.6	23.0	13.2
Chemicals products and man-made fibres	18.3	18.4	18.6	10.4	14.6	n.d.	18.0	15.3	15.8	15.4
Rubber and plastics products	16.4	15.6	18.9	7.3	6.4	n.d.	13.8	15.6	14.5	9.0
Basic metals and fabricated metals products	11.4	15.6	13.7	11.6	8.1	6.2	9.7	12.0	11.3	7.5
Machinery and equipment n.e.c.	16.8	16.0	18.6	10.1	9.5	n.d.	13.3	19.4	10.5	9.2
Electrical producer durable	20.8	27.8	26.3	12.7	14.4	n.d.	13.0	22.0	11.7	11.7
Motor vehicles, Other transport equipment	13.6	11.1	15.3	7.4	6.7	n.d.	12.8	16.3	9.2	5.7
Furniture; other manufactured goods n.e.c.	13.6	15.6	15.4	8.7	10.2	n.d.	12.5	13.3	5.0	9.0
Electrical energy, gas, steam, water	23.5	5.7	16.9	6.0	13.9	11.2	7.2	n.d.	20.3	11.1
Construction work	18.0	11.6	19.2	9.0	9.7	20.6	20.6	20.3	19.6	19.5
Trade and repair	41.7	56.1	54.8	43.9	31.6	31.6	39.2	34.3	47.0	48.4
Hotel and restaurant services	17.9	21.8	30.0	11.1	11.6	14.1	28.0	20.7	14.3	27.6
Transport services	24.0	33.9	23.6	20.8	14.9	34.0	30.9	22.4	16.1	24.0
Financial intermediation services-insurance	82.0	70.7	90.6	80.9	70.5	62.7	59.7	87.2	55.1	80.7

market services	46.5	43.7	42.1	30.6	31.9	30.1	50.6	51.4	47.2	49.3
Public Administration	36.2	20.5	29.0	28.5	27.9	24.3	26.0	26.6	20.2	40.1
TOTAL	**29.8**	**25.6**	**30.3**	**23.7**	**18.5**	**23.5**	**31.0**	**30.4**	**29.8**	**31.1**

Source : INSEE, CBS, ISTAT, Statistic Canada, Statistiches Bundesamt, Danmarks statistics, EUROSTAT, ...

II - MARKET OF SUB-CONTRACTING OF SERVICES

This part is based on a study carried out in France on the sub-contracting of the services [6], [7]. The countries targeted in this international part are the United States, the United Kingdom, Italy, Germany and France. International experts were met (DTI in the United Kingdom, Outsourcing in the United States).

One of the first reports which the study has fact is the absence of coherent figures which make it possible to locate the importance of the subcontracting in the quoted countries. There are multiple reasons with that, and in particular the heterogeneity of the definitions on the term of sub-contracting. We will thus limit ourselves to orders of magnitude and tendencies to evaluate the development of this practice. We would privilege following typology :

1. « facilities management » functions (general services), like restoration, cleaning, guarding.
2. services of the data-processing type - news technologies.
3. the functions supports which contribute to the effectiveness of the organisation but are not fundamental for the activity of the company (functional services like accountancy).
4. the key functions which are fundamental for the activity of the company (research)

a) the world market of the sub-contracting of businnes services is in very strong growth, Europe follows the tendency.

Although it is difficult to quantify, the world market of the sub-contracting is according to all estimates' in strong growth - the United States remain leaders with regard to relative volume and the percentage (half of the world market, is, according to The Outsourcing Institute, 100 billion of dollars in 1996 and 300 billion dollars into 2000).

Europe however represents the market which records the highest growth rate: - in term of total volume - in term of relative percentage - .

The factors and dynamic external which have an influence on the market of the sub-contracting :
- the development of the people receiving benefits and their offers;
- economic conditions : the recession in the United Kingdom at the beginning of the years 1990 supported the sub-contracting as management tool (this element is also valid in the United States).

The principal causes of the increase, in the UE, of the demand addressed to the business services enterprises are the increasing complexity of the commercial processes and the company, the evolution of the ' commercials practices ' and subcontracting. The growth of this sector is related to the economic growth in general, although, for certain specific under-sectors like the services of consulting, one notes a remarkable anticyclical effect: many large companies reduce the number of their own experts and conclude from the contracts with external services in order to reduce their overheads and their costs. Indeed, the services of consulting receive a keen demand when the economic situation is bad, because the companies seek an external help to start again their activity.

This point of view, specialisation, the technological development and the exploitation of the economies of scale play a significant role. Specialisation introduces more stages into the production process and requires more co-ordination between these stages. Moreover, the new designs of logistics reinforced the request for co-ordination and stimulated the requirement in services. The technological development, as for it, modified the organisation and involves the recourse to various services.

Subcontracting, the recourse to external services, become a current practice. It results a request increased in external business services. One can distinguish two alternatives from subcontracting. The first consists in sub-contracting a service carried out before inside the company. The arguments which plead in favour of this solution are a greater flexibility, a lower cost, a better quality of the service and the deficiencies in internal competence. The control of the production process plays, on the other hand, in favour of the maintenance of certain internal services. The second alternative consists in sub-contracting types of new services in the sector. For example, a company which is computerised also needs to rent a whole series of services related on automation and the programming.

The share taken by subcontracting varies according to the service and the size of the company; its characteristics also differ from one European country to another. The recourse growing to external consultants in organisation is related to a request for services which had never been carried out inside the company. The revision of the accounts, engineering, the telecomminications and advertising are entrusted to subcontracting in a rather great proportion (more than 60%). The combination of internal and external services is a enough widespread practice for the legal and data-processing services. Because of their strategic importance, the services of promotion and search and development are ensured within the company.

The sharing of market of the externalisation by branch of industry remains stable in Europe. This market is in strong growth in volume (at least 2 figures), but that it differs according to branches of industry's concerned. It can be estimated at 35% in the sectors of industry and

construction, 24% in the banks and insurance's, 7% in the trade and as much in energy, 3% in transport and the remainder (24%) in the administrations.

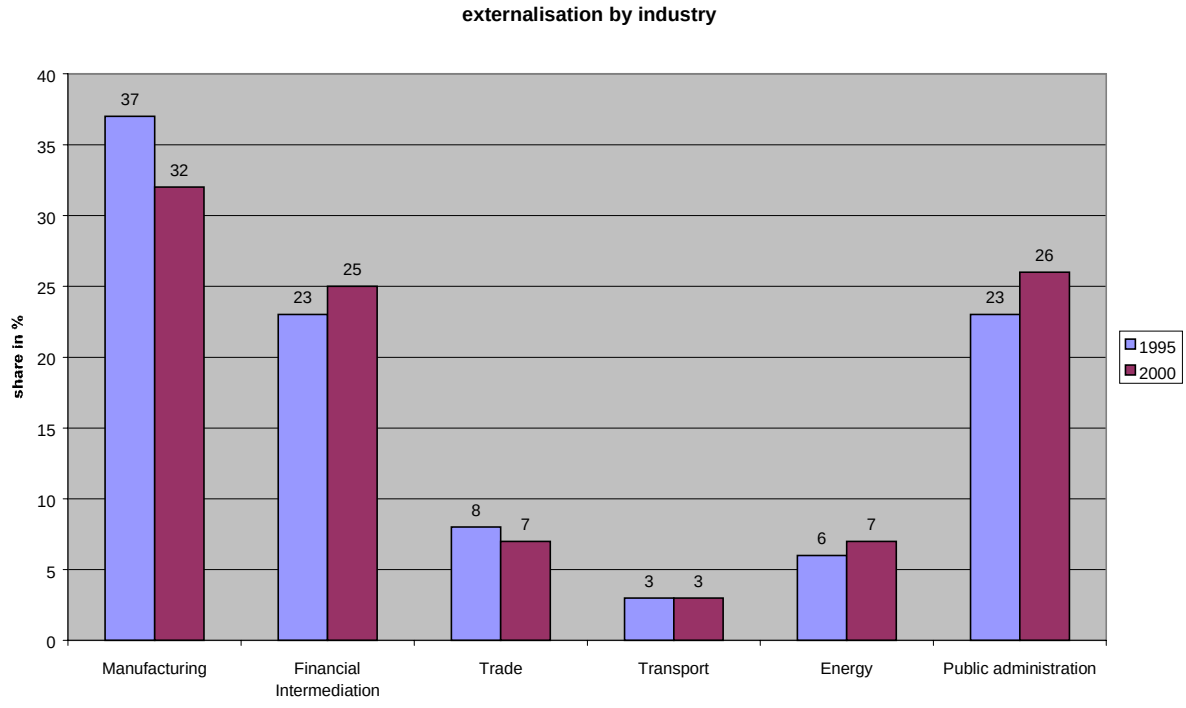
From here at year 2000, it would seem that this market does not progress in the production (-5%) contrary to the public sector or the sector of the services (for example financial intermediate and insurance's would record a growth of about 2 to 3%). The development of the sub-contracting in the public sector is significant in countries such as the United Kingdom whose majority of the ministries started a step of sub-contracting for a privatisation partial of their activities (ministry example for defence).

The figures do not have a clean significance, and thus are not very important. The table below gives an indication of the variations of consumption.

Countries	Budget en million ECU (1997)
France	212
Germany	223
United-Kingdom	381

Figure 1

Externalisation by industry within European Union in % of total market



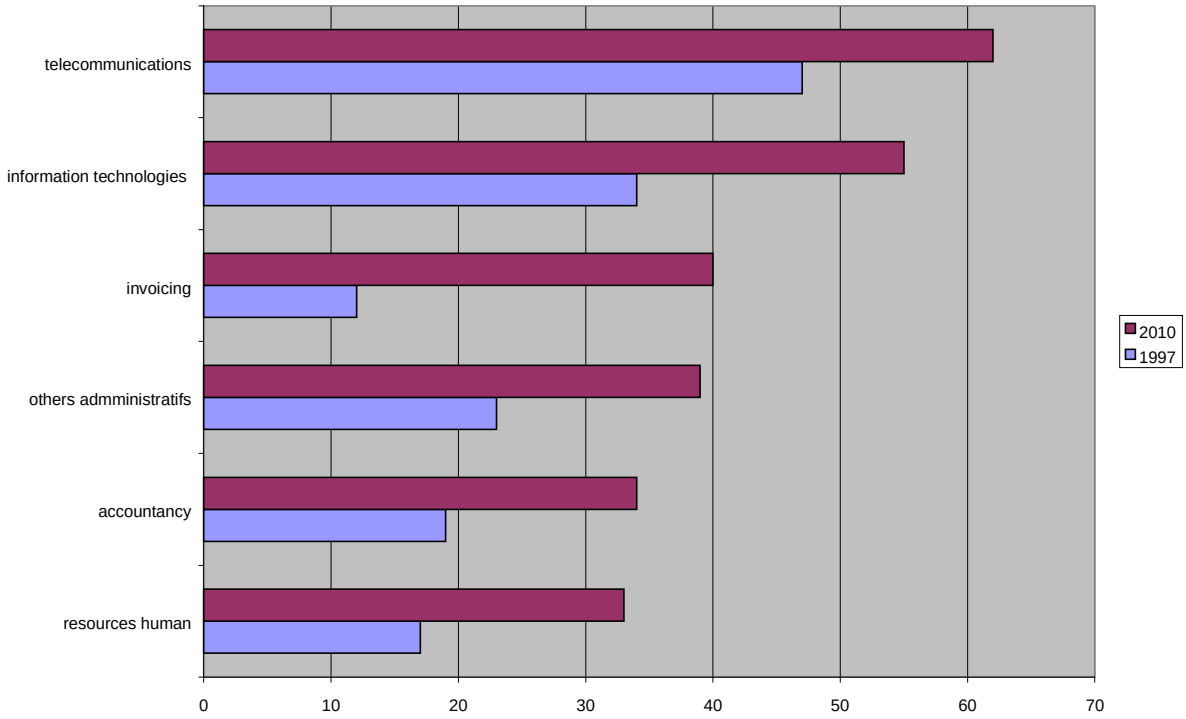
b) Functions externalised in the world : information technologies and telecommunications remain leaders

Information technologies as well as Telecommunications will remain the functions externalised from here to 2010 bus they require to have pointless qualifications. Nevertheless recourse to competence, the growth potential of the sub-contracting in functions such as accountancy or the invoicing is rather revealing maturity of the approach at the international level. Indeed, they are functions which form part of processes supports or sensitive close to the key functions (according to the type of enterprise), and are less naturally subcontracted first of all than information technologies for example.

In variation, the percentage of the guarantors and envisaging externalise would increase by 300% for human resources (which remain less externalised) with +130% for telecommunications.

Figure 2

Evolution of the sub-contracting by type of functions in %



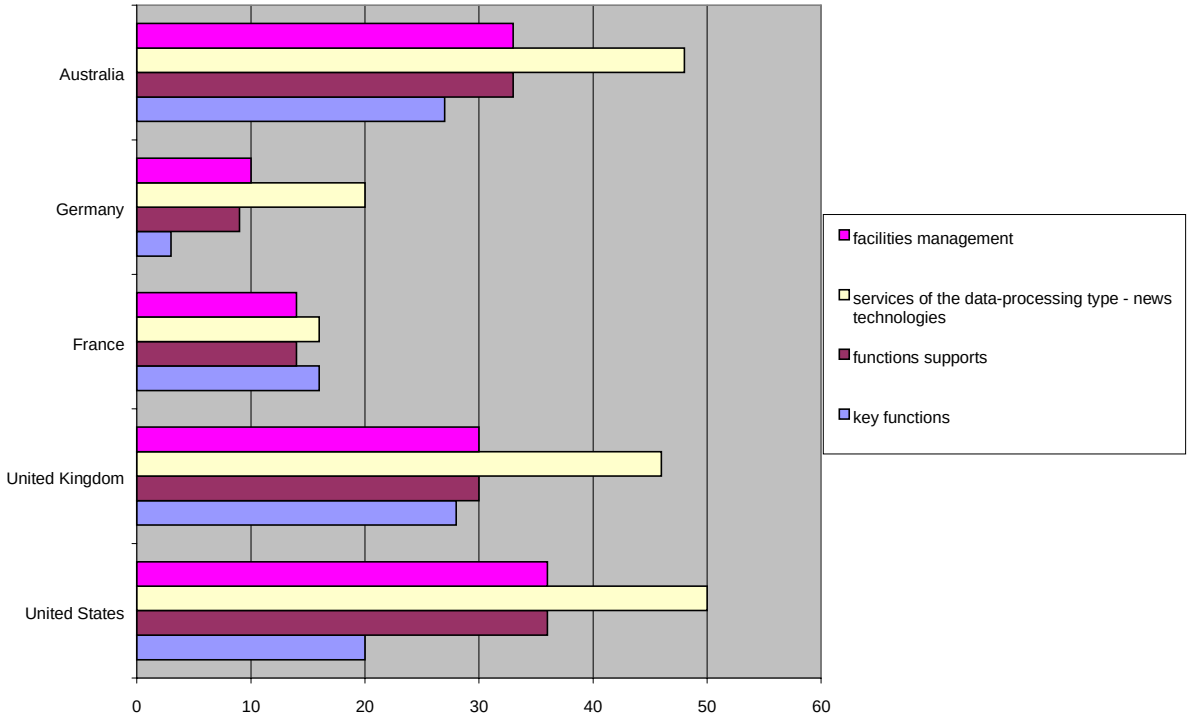
c) Sub-contracting of services is very strong in Anglo-Saxon countries

The sub-contracting of these processes being born, and is only carried out by a small number of companies leaders. The low level of development in Germany and France is explained partly by the legislative aspects related to the transfer of the personnel which are very different from those into force in the countries Anglo-Saxons. One also records more specific phenomena such as cogestion in Germany which constitute a barrier to the development of the step. In addition, cultural dimension is significant to understand the barriers to the development of the sub-contracting. For many companies, as well in France as in Germany, externalise is synonymous with loss and loss of control especially with being able for the majority of the leaders.

The figure 3 above, drawn from international studies carried out by Pa Consulting Group in 1997, highlights the differences between the countries of influence and culture Anglo-Saxon where the services are already strongly externalised and of the countries like France or Germany. With the exception of France or Germany, the companies already strongly externalise the services of the type " Facilities Management ". The growth will be done rather on information technologies or telecommunications in the Anglo-Saxon countries (the United States, the UK, Australia).

Figure 3

Percentage of the guarantors externalising the process in year 2000 in %



III - INDUSTRY OF SOME STRATEGICAL BUSINESS SERVICES

This paragraph does not discuss all the business services but focus on some of them which are strategically for companies like computer and related services, research and development services, public relations, Technical services-engineering, advertising and marketing. Moreover, it includes sometimes ancillary activity like in research.

We can notice some differences from countries according to services which relatives some conclusions before.

The degree of saturation of the market strongly varies according to services' taken individually. The production process are increasingly complex, which involves a more significant role of information and knowledge. The services related on the collection and the data processing, as well as the development and the application of knowledge, and which was created inside or outside the companies, grow in a number and the face. The business services such as the data processing departments, the data banks and the value-added

networks have a good growth potential. The management consultant, marketing, engineering and the legal assistance thrive because they answer the request and the questions that cause the increasing complexity and the internationalisation of the businesses. The services of audit approach the saturation of the market [8].

The companies proceed with more understanding in the choice of their providers as regards business services and do not return automatically in the provider who offered his services previously to them. On this point, a change took place, by the passage of a strategy based on the relation, with professional links in the long run, with a transactional strategy. This slip is explained, in particular, by the incapacity of the current providers to offer all the range of required competence, like by the influence of competition by the price. This evolution is heavy consequences for the companies which offer sales departments.

A significant factor in this respect is more pushed use of the information technology in the United States. In addition to the development of a greater request for services related to the operation of computer equipment, the need for various business services appeared, to implement and to guide the evolution of the mode of organisation and to guarantee the success of the introduction of the information technology. Another possible factor is the existence, in the United States, of a market of the sales departments more turned towards small and medium-sized undertakings, compared to the European countries and Japan

a) computer and related services

In the sector of the software, the most remarkable fields of growth are the following: software technologies multimedia, software and tools for Internet and relational data bases. The new multimedia applications and the appearance of an infrastructure of European information generated an enormous growth potential for the market. Meanwhile, the migration towards the open systems and architectures customer/server always cause changes on the market of the software system. The problems of evolutionary and heterogeneity of the companies will continue to push the request for personalised standard software intended to manage the communications and to be used as links between differently incompatible environments, thus meeting the needs for freedom of movement of information and interactive communication of the data, the voice and the video images via local area networks and wide-area networks. In general, as technology moves, the end-users tend to need the assistance of third to assist them in the choice of the hardware and the software and to ensure the formation and the assistance necessary to the optimisation of the advantages of technology. This includes also the services of electronic information. This one experienced a development very dynamic

during last decade. It is the United Kingdom which is with the point of these activities, realising more than 70% of the turnover out of its borders. The companies, and in particular the financial services are the first users of the services. In parallel, economic information accounts for 66% of the total market.

Table 5

Services of electronic information. Income by type of product, 1994 (million ECU)

(source IMO)

	data	data	banks	Video	Audio	elect.	others	Total	CD-	others	Total	others	TOTAL
	bases	histor.	time	tex	tex	mail	on-line	on-line	ROM	off-line	off-line		
			real				(fax)						
Belgium	0	7.7	2.9	2.9	0.1	3.6	0	17.2	24.4	1.3	25.7	0	42.9
Denmark	0	42.9	89.5	0.7	1.8	1.4	2.9	139.2	8.1	16.7	24.8	3.5	167.5
Germany	0	158.9	173.1	14	15.1	0	0	361.1	83.7	44.1	127.8	0	488.9
Greece	0	12.6	12.7	0.3	0	9.5	0	35.1	3.1	0.1	3.2	0	38.3
Spain	4.1	9.4	41.7	0.5	0.6	0.8	0	57.1	12.7	1.6	14.3	3.3	74.7
France	0	53.6	79.5	330	23.1	20.9	26.8	533.9	39.9	29.9	69.8	0	603.7
Ireland	0	2.3	1.1	1.8	0	0.2	0.5	5.9	0	0.3	0.3	0.3	6.5
Italy	0	115.2	33.7	66.5	0.5	0.2	0.4	216.5	38.2	9.4	47.6	0.4	264.5
Luxembourg	0	1.3	1.4	0.1	0	0.1	0.4	3.3	0.4	2.6	3	1.1	7.4
Netherlands	7.1	51.3	89.1	11.6	13.9	9.4	10.2	192.6	32.2	48.7	80.9	26.8	300.3
Austria	0	15.2	7.7	4.7	0	0	0	27.6	10.5	4.7	15.2	0	42.8
Portugal	0	4	13.5	1	12.4	0	0.7	31.6	28.1	1.7	29.8	0	61.4
Finland	0	23.4	25.5	8	31	7.5	1.5	96.9	2	0.9	2.9	0	99.8
Sweden	0	43.7	52.4	2.7	21.8	0	0	120.6	2.9	0	2.9	0	123.5
United Kingdom	3.2	1245	2029	51.9	137.5	0.1	1.3	3468	125	53.5	178.5	585.8	4233
European Union	14.4	1787	2653	496.7	257.8	53.7	44.7	5307	411.2	215.5	626.7	621.2	6555

b) Research and development services

Research and development (R&D) is produced in many different places e.g. at educational institutions, in hospitals, in enterprises, as well as in research institutes of different kinds. The R&D taking place as an integrated part of another activity in e.g. a manufacturing enterprise must according to ESA 1995 be identified and treated as intermediate consumption. Of course no ordinary market exists for these internal products. The production of R&D is, in most countries, split into a market and a non-market component. The non-market production for the greater part takes place within educational institutions and hospitals [9].

The R&D of zone OECD remains strongly concentrated on the seven principal countries which ensured, in 1995, nearly 90% of its domestic R&D expenditure (DRDE). The United States carried out 43,7% of this DRDE, contribution weaker than in 1981, where it accounted for 46,8%; that of the European Union passed from 33,5% in 1981 to 31,3% in 1995. Japan, on

the other hand, strongly progressed (18,6%). This concentration is the same one within the European Union where four countries ensure almost 80% of the domestic R&D expenditure.

If one retains like international comparison criterion ratio DRDE /GDP, this rate varies in 1995 from the United States (2,78%) , Japan (2,58%), France (2,34%) Germany (2,28%), Great Britain (2,05%). If one reports the effort of R&D to the working population, Germany, with 5,8 researchers for thousand, was, in 1994, on the same row as France, behind Japan (8 per thousand), the United States (7,4 per thousand) and in front of Great Britain (5 per thousand). It should be underlined however that countries of size less significant than France make a notable effort: it is the case of Sweden, which devotes to the R&D more than 3% of its GDP and more than 6% of its working population.

Table 6

Indicators of effort of research of the principal OECD countries (ratio DRDE /GDP in %)

	1981	1991	1994	1995	researchers /
					working population
United States	2.4	2.8	2.5	2.8	7.4
Japan	2.1	2.8	2.6	2.6	8.1
Germany	2.4	2.6	2.3	2.3	5.9
France	2	2.4	2.4	2.3	5.8
Italy	0.9	1.3	1.2	1.2	3.3
United Kingdom	2.4	2.1	2.1	2.1	5.1
Canada	1.3	1.5	1.6	1.6	5.2
Netherlands	1.9	2	2	2	4.8
Sweden	2.3	2.8	2.9	3	6.8

source : OECD [10] (including research for own-account)

c) engineers, technical testing

The services of engineers, technical testing are defined as the intellectual services intended to optimise the projects of investment in industry, the construction industry and the infrastructure, with all the stages of an industrial project from its design its completion.

The services of e engineers, technical testing are very requested by the sectors of construction insofar as no construction can be carried out without design, planning and management of the project.

During these last decades, Denmark, Germany, France, Italy, Austria gained in importance on the European market.

The table that we publish below results from the EFCA which gathers associations of the European states. However, the EFCA accounts for only 40% of the services of engineers,

technical testing in Europe. All in all, the sector includes 18500 companies and employs 430000 people.

Table 7

services of engineers, technical testing. main indicators, 1994 (million ECU)

	enterprises	Turnover	Labour	Exports	share of export	Wage earners	Turnover by
		(millions ECU)	force	(millions ECU)	in turnover (%)	by enterprise	wage earners
Belgium	100	366	4000	92	25	40	91500
Denmark	290	585	7937	141	24	27	73705
Germany	3640	6350	46000	700	N/D	13	138043
Greece	176	100	2800	15	15	16	35714
Spain	152	432	6134	4	1	40	70427
France	895	2257	23533	561	25	26	95908
Ireland	104	38	1020	N/D	N/D	10	37255
Italy	184	1060	18000	600	57	98	58889
Luxembourg	56	42	814	3	7	15	51597
Netherlands	250	913	11500	240	N/D	46	79391
Austria	1325	N/D	4730	N/D	N/D	4	N/D
Portugal	55	94	1949	3	4	35	48229
Sweden	177	370	6770	40	11	38	54653
United Kingdom	673	2109	37096	742	35	55	56852
European Union	8077	14716	172283	N/D	N/D	21	85418

Source : EFCA

d) Advertising services

There are two distinct and significant services that form the large bulk of the advertising product. In general terms these are ‘Placement’ – the selling of advertising space, whatever the media; and ‘Creation’ – excluding associated costs such as film production or photography services.

The share of the publicity expenses in the GDP is a good indicator of the effort in this field (as for search). The United States appears as an advertising market become ripe (the share of those in the GDP exceeds 1%). The Japanese market does not develop much any more during the decade 1990 after a strong growth during the decade previous

Table 8

Expenditure of Advertising services as a percentage of the GDP at purchasers ‘price

1994

Denmark	Germany	Spain	France	Italy	Netherl.	Austria	Sweden	UK	Europe	U.S.	Japan

0.80	0.90	0.88	0.66	0.49	0.75	0.80	0.80	1.13	0.82	1.24	0.80

source : EAAA

e) conclusion

One conclusion of this study reveals divergence on the use of business services according to countries, Anglo-Saxons are the most advanced But it is necessary to relatives these conclusions more closely by studying the various types of services [11]. For instance, research is relatively developed in Japan, Germany and France; engineers, technical testing is developed in Germany.

We must keep in mind that enterprises may have the choice between engaging them in ancillary activities or purchasing such services on the market.

National accounts approach is useful but dangerous without any methodological precautions to compare the input-output coefficient of business services. We have noticed that the differences between countries may reflect institutional and definition differences rather than economic.

At last, the big matter of subcontracting is to value some figures on productivity of labour and capital from national accounts. We could fancy an enterprise of motor vehicules industry which transfer all its function : how to calculate productivity of that enterprise (or industry) ?

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