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Central Product Coding

An Empirical Application of the Identification and Classification Criteria for Business Services

by Marco Martini

PREFACE

Two methods can be used in order to classify the economic activities, products and professions: *Top down* or *Bottom up.*

Most of the international and national classifications adopt the *Top down* approach. The "world" under observation is subdivided in hierarchical partitions of modalities which correspond to the conception of the classifier. Subsequently, the modalities are observed on the statistical units. In so doing, these are constrained *a priori* into the classificatory system. The described approach presents considerable disadvantages with regard to the "activities", "products" and "professions".

The *Bottom up* approach specifies various conceptual categories which are related to corresponding statistical variables. Several modalities can be observed on every statistical unit and open modalities are also envisaged.

This approach was adopted in a theoretical study compiled by Marco Martini presented at the sixth meeting of the Voorburg Group held in Helsinki last year. The study focused mainly on business service classifications using the following five functional criteria for the identification of services: type of client for whom the action is intended, the function or need which this meets, the way in which the producer interacts with the user, the means used for the action and the time period needed for the action.

The Group remarked that there had long been a need for this kind of study and that many of the paper's conclusions seemed useful.

The theoretical study has now been implemented as a sample survey on business services carried out in the metropolitan area of Milan. The present paper describes the results of the sample survey with regard to the market of the enterprises (turnover) and the human resources employed.

The above mentioned pilot survey reveals that the *Bottom up* approach is more appropriate to the sensitiveness of the interviewed and allows various possibilities for ex-post classifications. The research based on the definitions *a priori* of a certain number of functions, sub functions and modalities allowed the reclassification, in particular, of the economic activities and products of the local units of an enterprise sample in the metropolitan area of Milan.

The need for ex-post reclassification was been also pointed out by the findings of the business sector pilot surveys which shows that an important number of individual enterprises were active in more than one subsector (see E. A. Fisher & Saida Slama: Eurostat Experiences on Pilot Surveys: Preliminary Results for the Business Service Sector.

It would be interesting to compare these results with experiences done in similar areas in other countries.

Marco LANCETTI

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INTRODUCTION

In 1991, the CLAS Group carried out a survey entitled "The supply of innovative services within the Milan metropolitan area" for the Assolombarda "Innovative services to businesses" group in Milan.

The survey, directed by Prof. Marco Martini of Milan University, was carried out in two parts. The first part was devoted to an analysis of the growth of business services in the Milan area over the period 1981-1989 on the basis of the ASPO (Lombard Region chambers of commerce union) data base. The second part consisted of a sample survey of Business Service company forms and strategies, their target market, the types of services offered and the structure of human resources involved, with reference to the Milan metropolitan area in 1990.

The results of the entire survey, available from Assolombarda in Milan, will be published in one volume and presented at a public convention to be held in Milan in October 1992.

The results obtained were so useful that Assolombarda decided to ask the CLAS Group to repeat the sample survey every two years. The 1993 survey will refer to 1992.

It would be an extremely useful exercise to compare these results in space as well as in time by conducting the survey in the large metropolitan areas of other countries.

The sample survey questionnaire was designed and prepared on the basis of ideas put forward in M. Martini's document entitled "*Statistical Implications of the Business Services....*" presented in Marco Lancetti's paper "*Services classification system: classification of service functions*" at the sixth meeting of the Voorburg group, Helsinki 7-11 October 1991.

The new **business services** identification and classification criteria proposed in this document, i.e. Client (C), Function (F), Mode (M), Level (L) proved to be highly effective on the operational level. Indeed the questionnaire was much admired by companies that took part in the survey and the modes adopted in the part relating to the functional distribution of turnover were found to be exhaustive.
This document, prepared with the seventh meeting of the Voorburg group in mind, is concerned with the results of the part of the sample survey (par. 1) relating to the market (turnover) (par. 2) and human resources (par. 3). The former was estimated according to the territorial and sectorial distribution of **client** companies (C) and types obtained by examining the interplay between user **functions** (F) (and subfunctions) and operating **modes** (M). The latter were estimated with reference to the **level** (L) not only of in-house resources (freelance workers and employees) but also of outside resources: professionals, permanent collaborators etc.

The survey questionnaire prepared by the CLAS Group and AIL is appended to this presentation. This also concerns other aspects of Business Services: form, structure, consolidation strategies, client type and number, future prospects, etc.

1. SAMPLE SURVEY INTO THE BUSINESS SERVICES MARKET IN THE MILAN METROPOLITAN AREA, 1990

Despite the crucial role played by the advanced or innovative services sector, little appears to be known about it in quantitative terms. Italian national audit data show that altogether these services now account for the most significant share of employment and added value in advanced industrial economies (1). Macroeconomic studies carried out on input output tables reveal that services, particularly services to businesses, play a key role within the economic system (2).
Surveys into demand reveal the growing extent to which industrial and service sector firms now use business services (3). It is important to note that the first survey into the demand for advanced services in Milan was carried out by the Assolombarda Study Centre: "The demand for advanced business services in an area of high industrialization", by F. Fioretta, M. Mamoli, 1981.
The supply of services to companies has not yet been satisfactorily quantified. This is due to an outdated system for classifying economic activities and products that relies over-heavily on a tangible approach and also to a lack of the kind of comprehensive, up-to-date company statistics essential for obtaining samples and calculating coefficients in order to extrapolate sample data outward to obtain a general overview (4).
The study presented here offers for the first time an estimate of the composition of the Business Service market obtained from the results of a sample survey that made use of a new data bank containing information on all companies. A new activity and product classification procedure was also adopted.
The sample was actually taken from the ASPO data bank that supplies up-to-date data on some 600 thousand local businesses and their employees. These firms were classified into 650 categories of economic activity and also grouped by size and legal status for each of the 1546 communes that make up the region of Lombardy (5).
Business services were defined and classified in accordance with the *client-function-mode* criterion (6).
More specifically, the survey was carried out on companies located within the Milan metropolitan area in 1990. All studies indicate that this area displays the highest concentration of business services in Italy and the highest overall growth rates (7).

1.1 - Field of observation: Business Service companies

The research was carried out on companies that offer innovative services to other organizations (service content will be specified later).
International systems used to classify economic activities (CTCI for the UN and NACE for the EEC) and derivative Italian national classification systems (ATECO for ISTAT [Italian Central Statistical Institute]) include hire services, finance companies and insurance companies under the heading "business services" (ATECO 81: category 83) as well as some purely operational services such as translation, cleaning, photocopying and typing etc.
This survey, however, considers only activities that affect key client company

functions (administration and finance, sales, human resources, information and technology) through their supply of innovative services.
Five main activity sectors were therefore identified:

1. Financial and administrative services (ATECO 81: subcategories 835 and 836);
2. Marketing and advertising (ATECO 81: subcategory 838 and category 839.1);
3. Consultancy and organization (ATECO 81: category 839.2);
4. Information services (ATECO 81: category 839.3);
5. Engineering and technical services (ATECO 81: subcategories 83.7) (8).

The set of five activity sectors identified in this way was headed "Business Services" to distinguish it from the wider grouping of "Services to Companies" that includes, as already mentioned, activities of commercial or financial intermediation, whose boundaries with traditional activities tend to be blurred - in addition to purely operational activities.
The new ASPO data bank provides an overall picture, updated in 1981 and 1989 (9), of local businesses and the employees of non-agricultural private companies (with the exception of professionals).

From this it was possible to obtain, for the province of Milan, information on the size and dynamics of Business Services, the category of services to companies (category 83) and the entire service sector - which includes trade, transport, credit, insurance, communications and personal and social services (branches 6 to 9) and the entire private economy (industry and services, branches 0 to 9).

Table 1.1 - Local firms and employees, Province of Milan 1981-1989 (9)

Local businesses	1981	1989	% change
Total service industry	232,814	273,997	17.7
of which: service sector	153,061	180,976	18.2
of which: services to companies	13,616	24,721	81.6
of which: business services	7,279	15,280	109.9

Employees	1981	1989	% change
Total service industry	1,533,731	1,599,868	4.3
of which: service sector	665,232	786,994	18.3
of which services to companies	71,429	127,148	78.0
of which business services	42,962	83,382	94.1

Source: AIL table - CLAS group, ASPO data

As a result of explosive growth rates that far exceeded the results achieved by any other activity during the eighties, the numbers employed by Business Service companies within the Milan metropolitan area rose from 2.8% to 5.2% of the total. These figures were on a par with those of major sectors such as building, chemicals and machine tools. It should be noted that the figure of 15,280 local Business Service companies estimated by ASPO for 1989 does not include professionals, who also operate within related fields such as legal and tax consultancies and so on. This sector also underwent a boom during these years (10).
In order to demarcate a homogeneous field for observation, it was decided to exclude from the survey smaller local firms with only one or two employees that mainly take the form of sole proprietorships. Despite their different legal status, in terms of organization they have more in common with professionals than with larger companies.
After excluding local businesses with one or two employees from the field of observation, the reference sample consisted of 8,514 small (3-9 employees), medium-sized (10-49 employees) and large (more than fifty employees) local businesses dimensions that provided work for 73,839 employees altogether.

Table 1.2 - Local Business Service firms and employees by size category and sector (Province of Milan, 1989)

Local firms

Employees	3-9	10-49	more than 50	Total
Financial and administrative services	1,029	176	27	1,232
Marketing and advertising	1,906	161	41	2,108
Organizational consultancy	674	76	8	758
Information services	1,269	307	23	1,599
Engineering and technical services	2,531	246	41	2,818
Total	7,409	966	140	8,515

Employees

Employees	3-9	10-49	more than 50	Total
Financial and administrative services	5,693	3,152	3,128	11,973
Marketing and advertising	9,206	3,111	4,371	16,688
Organizational consultancy	3,761	1,297	605	5,663
Information services	7,184	4,839	2,846	14,869
Engineering and technical services	12,917	4,632	7,097	24,646
Total	38,761	17,031	18,047	73,839

Source: AIL table - CLAS group, ASPO data (first update)

1.2 - **Sample survey**

A postal questionnaire was sent out in March 1991 to 2,588 companies. These included 1106 local firms with 10 or more employees and 1482 firms with 3-9 employees (20% of total). A particularly high number of satisfactory, complete responses was received. After a thorough check and some reminders, we were in fact able to obtain completed questionnaires for 260 local firms and thus the sample was representative by a comfortable margin. It was noted that most responses were received from non-associated companies.

The sample was made up in such a way that more and more firms were represented as we moved up the classification table from small (3-10 employees), through medium-sized (10-49 employees) to large (more than 50 employees) companies. As the size of companies become larger, therefore, and thus also the variability of parameters investigated, the significance of estimates did not fall. Furthermore, because total sample size was known and thus also extrapolation coefficients for each of the fifteen bands obtained by combining the three size categories with the five sectors considered, it was possible to achieve a considerable reduction in the standard error of estimates relating to sector or size category subsets and - more importantly - the set of firms included in the survey.

The questionnaire (appendix 1) was based around three topics:

- form and relationships of Business Service companies
- territorial and sectorial organization of their market
- type of services offered
- structure and level of human resources involved

Table 1.3 - Local firms and employees of companies responding to survey (1990)

Local firms

Employees	3-9	10-49	more than 50	Total
Financial and administrative services	27	19	5	51
Marketing and advertising	17	17	7	41
Consultancy and organisation	20	5	3	28
Information services	28	20	20	68
Engineering and technical services	37	23	12	72
Total	129	84	47	260

Employees

Employees	3-9	10-49	more than 50	Total
Financial and administrative services	146	374	684	1,204
Marketing and advertising	84	318	1,024	1,426
Consultancy and organization	76	106	338	520
Information services	137	543	2,270	2,950
Engineering and technical services	155	532	1,643	2,330
Total	598	1,873	5,959	8,430

Source: AIL table - CLAS group

Questions of a qualitative and quantitative nature were set in relation to each of these subjects. From the responses, it was possible to calculate sample estimates for each case as percentages of firms, employees or turnover.
Because the reference sample (employees and local firms) was known, it was possible to obtain results that applied to all companies operating within the Milan territorial area by calculating weighted means, as appropriate, by using the number of local firms or employees.

2. THE BUSINESS SERVICES MARKET

In order to understand the dynamics of Business Service companies, attention must be focused on the market and the boom it has undergone.

2.1 Size of turnover

The average turnover of a local Business Service firm operating within the Milan area in 1990 was 1,213 million. This corresponds to an average turnover per employee of 130 million and is accounted for by an average of 156.8 for large companies, 161.8 for medium-sized companies and 103.7 for small companies.

This information is entirely consistent with data supplied by ISTAT(11). This institute estimates the average turnover per employee at 83.6 million in 1986 and 94.6 million in 1988 for north west Italy within category 83, services to companies.

It may be noted that the average turnover per employee in the service sector is much lower than in industry due to the lower proportion of intermediate consumption within the former.

The incidence of added value on turnover is particularly high in the case of services to companies.

The fact that the average turnover per employee in medium-sized companies is higher than in large companies may in part be attributed to the fact that, as will be explained, the former use outside assistance more often than the latter.

Another significant fact is that beyond a certain threshold, that lies within the medium-sized band of 10-49 employees, the average turnover per employee ceases to rise with size.

This fact constitutes a significant difference between companies included in the survey and industrial companies, where a direct correlation between size and average turnover per employee applies. This difference may be attributed to the specific nature of Business Service company activities.

Table 2.1 - TURNOVER OF LOCAL FIRMS OPERATING WITHIN THE PROVINCE OF MILAN (in millions of lire)

	Size category			
	3-9	10-49	more than 50	total
Mean per local firm	544.4	3,595.9	21,374.4	1,212.9
Mean per employee	103.7	161.8	156.8	130.0

As becomes clear when the distribution of turnover is analyzed according to the type of services offered, the services mainly involve establishing face to face contact with the client. The more emphasis the competition places on quality rather than price, the more irreplaceable this type of contact proves to be.

Above a certain threshold, the increase in co-ordination costs appears to make up for the reduction in general costs per employee that accompanies increasing company size within the main activity sectors.

From sample data on turnover per employee and on employees, updated in 1990, it was possible to put together an estimate of the turnover of Business Service firms operating within the province of Milan for the five sectors and three size categories considered.

Table 2.2 - TURNOVER OF BUSINESS SERVICE FIRMS OPERATING WITHIN THE PROVINCE OF MILAN (billions of lire)

	Size category			
Sectors	3-9	10-49	more than 50	Total
1. Financial and administrative services	248	705	556	1,509
2. Marketing and advertising	1,226	256	587	2,069
3. Consultancy and organization	401	210	89	701
4. Information services	1,135	560	983	2,678
5. Engineering and technical services	939	1,063	671	2,667
Total	3,949	2,794	2,886	9,624

Note that in order to make a comprehensive estimate of the Business Service company market, we should add the turnover from the very small firms and professionals excluded from the survey to the 9624 billion from firms with more than 3 employees (12).

The survey provides interesting information on territorial and sectorial market shares.

2.2 Territorial distribution of clients

Table 2.3

PERCENTAGE OF 1990 TURNOVER FROM:	Size category 3-9	10-49	more than 50	total
international market	18.0	19.2	19.4	18.5
Italian market	82.0	80.8	80.6	81.5
of which: from local market (province of Milan)	43.5	31.3	31.8	36.8

Territorial distribution does not differ greatly according to size.
A significant portion of the turnover (18.5%) comes from exports. This applies not only to large companies but also to small and medium-sized firms. These results confirm an overall leaning toward the international front throughout the sector described.
Of the remaining activities carried out within the Italian home market, small companies direct more than half their efforts toward the local market (province of Milan), whereas medium-sized and large companies show a greater tendency to set their sights on the wider national market.

2.3 Sectorial distribution of clients

Table 2.4

PERCENTAGE OF 1990 TURNOVER FROM:	Size category 3-9	10-49	more than 50	total
Industrial companies	61.4	53.0	59.0	57.7
Private services	24.8	35.0	24.1	27.4
Government	7.4	6.7	14.1	9.2
Other	6.5	5.3	2.8	5.8

A significant proportion of the turnover, 57.7%, comes from industrial companies.
On this subject, it should be noted that many Business Service companies arose from the breakdown of industrial companies. This is confirmed by the fact that the turnover from industry obtained by smaller firms is higher than the average.

27.4% of the turnover comes from the private service sector (banks, insurance companies, distribution, transport, hotels and communication) and 9.2% from Government departments (State, Regions, Provinces, Communes etc.). Forecasts for the immediate future differ according to size category.

2.4 Distribution by type of services offered

Difficulties in measuring the value and volume of the types of services offered are mainly due to theoretical ambiguity over definitions and classifications. These services cannot be treated as tangible objects and described in terms of major technologies (e.g. chemistry, mechanics, textiles etc.), materials used (for example wood, plastic, leather etc.) or finished products (furniture, means of transport etc.).
Neither, however, is it sufficient to describe services in terms of what they are not - (e.g. tangible, transportable or stockable) since this approach cannot be used for the purposes of definition, still less for classification. For this reason, international and national classification systems used for economic activities and products are still very unsatisfactory when applied to services, and services to companies in particular.
In the survey, as already mentioned, we adopted a new form of definition that considers services not as "things" but as "transitive actions" performed by a subject (provider) acting for another subject (user) (M. Martini "Statistical implication of the Business Services Market Analysis: identification and classification criteria: Eurostat, 1991).
As a result, services have been classified according to users' functional needs and the various ways in which providers operate.
In particular, because Business Services are offered by businesses to other businesses, their type may be obtained by crossing user company functions with provider company operating modes.
For the purposes of this survey, five user company functions (subsystems) were considered:

1) administrative and financial function
2) sales function
3) human resource function
4) information function
5) technological function

and five operating modes:

1) consultancy offered by provider to user
2) actions that take the form of studies, research and projects carried out by the provider to support the decisions of the user
3) actions carried out by the provider that affect the organizational approach of the user
4) operational actions, i.e. standard operations specified by the user to the provider
5) training operations carried out by the provider on user company personnel

Each type of action may relate to one of the five company functions or to groups of these (for example, to both administrative and sales functions) or to subfunctions (for example: legal, fiscal or insurance aspects within the administrative function).

In the same way, complex actions may involve a combination of several modes (for example, feasibility studies, operational actions and training).
The various combinations are dependent on the complexity of the user organization and the composition of provider company specializations and may alter with time.
The survey was therefore carried out by asking each company - whatever its size and main declared activity - to break down its turnover into 56 types of services. These were obtained by crossing the five operating modes with the five user company functions and, where applicable, the associated subfunctions.
The results were extremely satisfactory. All responding companies could identify themselves in the prepared grid and the modes given proved to be exhaustive.
It was therefore possible to estimate the distribution of overall Business Service turnover according to increasingly complex levels of analysis.

2.4.1 <u>Turnover by user company function</u>

Table 25

USER COMPANY FUNCTION % values	Size category 3-9	10-49	more than 50	total
Administrative function	6.5	26.1	19.9	15.7
Sales function	30.8	8.0	20.3	21.5
Human resource function	10.2	7.2	2.7	7.3
Information system	28.9	20.2	33.9	27.8
Technological function	23.6	38.5	23.2	27.7
Total	100.0	100.0	100.0	100.0

USER COMPANY FUNCTION % values	Size category 3-9	10-49	more than 50	total
Administrative function	15.7	47.3	37.0	100.0
Sales function	58.8	11.8	29.4	100.0
Human resource function	58.3	29.7	12.0	100.0
Information system	42.6	21.0	36.4	100.0
Technological function	34.7	40.2	25.1	100.0
Total	41.0	29.0	30.0	100.0

The two company functions from which the greatest proportion of turnover derives are information and technology. These are followed by sales and administrative/financial functions. The function that accounts for the smallest proportion is human resources.
For small companies, the sales function is the most important (30.8%), technology is most important for medium-sized companies (38.5%) and data processing (33.9%) for large companies.

It is interesting to observe that user company functions do not correspond fully to the main activity sectors declared by provider companies.

2.4.2 Turnover by function and main activity sector of provider company

Table 2.6

	Activity sectors					
User company functions	Financial and admin. services	Marketing and advertising	Consultancy and organization	Services and information	Engineer. and tech. services	Total
Administrative and financial function	87.1	1.1	9.8	3.2	3.2	16.4
Sales function	0.9	87.6	5.7	1.1	0.5	19.8
Human resource function	2.1	3.4	66.0	3.3	0.9	7.0
Information system	7.0	2.5	12.3	88.7	2.4	27.9
Technological function	2.9	5.4	6.2	3.7	93.0	28.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

In particular, 34% of services provided by companies that state their main economic activity as "consultancy and organization" fall into various human resource function categories. In the same way, 12-13% of the turnover of companies in the sectors "Administrative and financial services", "Marketing and sales" and "Information services" also relates to functions other than the main function. On the other hand, only 7% of the "Engineering and technical services" sector is accounted for by non-engineering functions.

This confirms that the overall activities of business services companies are highly flexible, often combined with other specializations, and also that the boundaries of Business Service companies depend more on the mission they set themselves in relation to their ability to penetrate the market and less on their know-how or the technologies used in their plants. In this respect too, the strategy of permanent agreements with other companies described above is also of key importance.

2.4.3 Turnover by operating mode

Operating actions, in other words the carrying out of standard operations on behalf of the client company that may involve the use of relatively unskilled personnel, account for about one third of overall turnover. The remaining two thirds are mainly made up of "consultancy and analysis", "studies", "research and design" and "actions on organizational approach". Each of these accounts for about 20% of turnover. By their very nature, these modes demand the involvement of highly skilled personnel able to communicate with the user company and the provider company and also to set problems and solve them. Training operations account for a very small share of the market (3.3%). In this field, companies included in the survey come up against competition from specialized public institutions (Universities, Research Centres), which account for the lion's share of a market often supported by public finance.

Table 2.7 - Turnover per user function and operating mode

Activity sectors

User company functions	Consultancy and analysis	Studies, research and design	Actions on organiza- tional approach	Operational actions	Training	Other	Total
Administ- rative and financial function	52.6	0.0	8.8	34.6	2.2	1.8	1000
Sales function	18.8	40.8	7.9	28.7	3.4	0.4	1000
Human resource function	39.2	0.0	8.2	25.7	15.8	11.1	1000
Information system	14.6	9.5	31.4	39.0	3.3	2.2	1000
Tech- nological function	22.5	29.7	32.4	13.8	0.6	1.0	1000
Total	25.4	19.7	21.4	28.1	3.3	2.1	1000

The various operating modes are not of equal importance within the different user company functions.
The "consultancy and analysis" mode is most important within the administrative and financial function (8.3%) and also the "human resource" function but is also a significant presence in the "sales" and "information system" functions.
The "studies, research and design" mode is most important within the "sales" function (8.8%), particularly in the form of "market research", but is also strongly represented in the "technological" function (8.2%), in the form of "engineering design".
The organizational approach operating mode occurs most frequently within the "technological" function (9.0%), particularly in the form of "turnkey projects", and in the "information system" function in the form of "system planning and development".
Lastly, operational actions are a significant presence in the "information system" function, particularly in the form of "data processing services", but are also well-represented in the "administrative-financial" and "sales" functions.
The detailed distribution of main service types, shown in decreasing order of turnover, for each user function and according to the size category of the provider company, indicates the variety and complexity of the supply and corresponding market shares.

OPERATING MODE

User company functions	Consultancy and analysis	Studies, research and design	Actions on organizational approach	Operational actions	Training	Other	Total
Administrative and financial function	32.4	0.0	6.5	19.3	10.3	13.5	15.7
Sales function	15.9	44.7	7.8	21.8	22.1	3.8	21.5
Human resource function	11.2	0.0	2.8	6.7	34.9	39.2	7.3
Information system	16.0	13.4	40.9	38.6	27.9	29.5	27.8
Technological function	24.5	41.9	42.0	13.6	4.8	14.0	27.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 2.9 - Turnover by type of services offered, for user functions and size categories

1 - Services destined for the administrative and financial function (billions of lire)

Type	Size category 3-9	10-49	more than 50	Total
Financial consultancy	26.4	119.3	147.0	292.6
Accounting services	126.6	114.7	30.1	271.4
Administrative consultancy	13.4	169.6	22.0	205.0
Insurance consultancy	0.0	8.9	145.2	154.0
Insurance brokers	0.0	0.0	138.6	138.6
Auditing	0.0	55.5	56.1	111.6
Planning and control	35.9	42.1	12.5	90.5
Strategic consultancy	15.8	66.7	5.8	84.7
Organization of financial resources	18.5	23.7	0.0	42.3
Fiscal consultancy	(°)	33.5	0.0	34.6
Training of administrative personnel	5.1	27.6	0.0	32.7
Legal consultancy	5.1	19.0	0.0	24.1
Other	(°)	26.0	0.0	26.0
Total	249.0	705.0	556.3	1509.0

(°) Non-significant data

2 - Services destined for the sales function (billions of lire)

Type	Size category 3-9	10-49	more than 50	Total
Market research	369.6	44.5	342.3	756.4
Sales consultancy	173.0	23.5	36.3	232.9
Advertising campaigns	68.6	10.7	101.6	180.9
Marketing consultancy	113.2	16.6	28.0	157.8
Organization of exhibitions and fairs	141.0	13.0	0.0	154.0
Advertising space sales	64.8	55.5	0.0	120.3
Organization of promotional campaigns	97.4	6.9	9.4	113.6
Sales personnel training	47.3	13.1	9.9	70.3
Public relations	44.6	11.2	0.0	55.8
Feasibility studies for new products	20.5	22.6	6.9	50.0
Sales planning	11.8	3.0	34.3	49.1
Training and recruitment of salesforce	42.4	6.7	0.0	49.1
Opinion polls	11.4	7.2	19.9	38.5
Direct marketing	19.3	5.9	7.5	32.7
Other	0.0	6.4	(°)	7.7
Total	1226.0	246.8	587.3	2069.2

(°) Non-significant data

3 - Services destined for the human resource function (billions of lire)

Type	Size category 3-9	10-49	more than 50	Total
Organizational consultancy	147.5	41.1	22.2	210.8
Recruitment of and search for managers and staff	101.0	14.6	16.2	131.8
Training of managers and staff	44.6	17.6	10.9	73.1
Human resource management consultancy	18.5	36.6	8.1	63.5
Recruitment of and search for other personnel	39.8	7.7	(°)	48.1
Human resource development plans	23.3	10.6	7.5	41.4
Training of other personnel	14.2	12.2	11.1	37.5
Human resource assessment	12.0	0.0	(°)	16.4
Other	(°)	69.9	7.5	78.0
Total	400.9	210.3	89.4	700.6

(°) Non-significant data

4 - Services destined for information system (billions of lire)

Type	Size category 3-9	10-49	more than 50	Total
Data processing services	240.3	146.5	422.6	809.4
System programming and development	385.0	159.1	114.1	659.2
Analysis and consultancy	160.0	98.0	133.7	391.7
System design	136.2	50.9	67.0	254.1
System integration	90.4	40.1	51.5	181.9
Software maintenance	43.0	29.9	84.0	156.9
Computer personnel training	42.6	23.4	22.1	88.5
Hardware maintenance	37.9	11.7	29.0	78.0
Other	0.0	0.0	58.7	58.7
Total	1135.4	559.6	983.4	2678.4

(°) Non-significant data

5 - Services destined for technological function (billions of lire)

Type	Size category			Total
	3-9	10-49	more than 50	
Turnkey projects	14.6	403.6	367.6	785.9
Engineering design	309.2	198.7	155.2	663.1
Other consultancies	255.0	229.6	(°)	486.0
Assistance during design stage	42.2	74.3	29.8	146.3
Feasibility studies	35.1	59.0	22.5	116.5
Quality control and certification	87.6	8.7	8.6	104.9
Organization of production and quality systems	34.7	29.6	11.7	76.0
Town-planning and building consultancy	56.0	7.0	5.3	70.3
Purchasing and tenders, preparation of tender documents	23.3	14.0	23.3	60.6
Environmental and ecological consultancy	25.2	16.2	(°)	44.3
Realization and installation of systems	24.1	5.9	3.7	33.7
Product and material analysis	(°)	10.0	10.4	21.2
Technical personnel training	13.0	(°)	(°)	15.4
Development plans	10.7	(°)	(°)	13.5
Other	7.1	0.0	22.0	29.4
Total	938.6	1063.5	664.7	2666.8

(°) Non-significant data

3. HUMAN RESOURCES

Human resources is without doubt the strategic resource of Business Service companies. The success of these companies depends on their ability to increase their number of clients and turnover while the quality of most services offered depends on the company approach to problem setting and problem solving. Business Services may perform their services using both in-house and external resources.

3.1 In-house resources

Table 3.1 - Employees of local firms in the Province of Milan 1990, by position and role

% value	Size category 3-9	10-49	more than 50	total
Businesspeople, partners, family members of which:	41.1	11.0	0.8	25.0
general service operatives	(15.0)	(2.7)	(0.4)	(13.3)
Employees of which:	58.9	89.0	99.2	75.0
general service operatives	(13.5)	(17.5)	(15.0)	(14.0)
Total of which:	100.0	100.0	100.0	100.0
general service operatives	(28.5)	(20.2)	(15.4)	(27.2)

25% of in-house resources permanently attached to the company are independent (businesspeople, partners, family members) while 75% are employees: of which 58.7% office workers, 11.6% managers and staff and only 4.8% with other titles.

The mean number of independent workers in each size category is about two. These are backed by about three employees in small companies, 20 in medium-sized companies and 120 in large companies.
The proportion of independent workers out of the total naturally falls with size (from 41% to 0.8%) while that of employees increases both for managers (7% to 17.8%) and, above all, for office workers (from 46% to 80%).

The ratio of mangers and staff to office workers is 1 to 6: 1 to 7 in small companies, 1 to 4 in medium-sized companies and 1 to 5 in large companies.
Staff involved in general services amounts to 27% of operatives: 28.4% in small companies, 20.2% in medium-sized companies and 15.4% in large companies.

Table 3.2 - Operatives in local businesses in the Province of Milan 1990 by grade and working hours

% value	Size category			
	3-9	10-49	more than 50	total
Businesspeople, partners, family-members	41.1	11.0	0.8	25.0
of which: part-time	(1.5)	(0.5)	(0.0)	(1.6)
Employed managers and staff of which:	7.0	16.7	17.8	11.6
part-time	(0.2)	(0.2)	(0.0)	(0.1)
Office workers	46.0	67.0	80.1	58.7
of which: part-time	(1.7)	(1.3)	(2.6)	(2.6)
Other employees	5.9	5.2	1.2	4.8
of which: part-time	(1.1)	(0.8)	(0.0)	(1.1)
Total	100.0	100.0	100.0	100.0
of which: part-time	(4.5)	(2.9)	(2.7)	(4.6)

Moving up from small to medium-sized firms, the incidence of general services and co-ordination decreases. Moving up from medium-sized to large companies, on the other hand, a fall in general services corresponds to a rise in co-ordination.
Surprisingly enough, part-time working is not widespread. This involves only 4.6% of staff. In small and medium-sized firms, it mainly applies to "other employees" whose supporting roles do not justify full-time hours.

3.2 Outside resources

Table 3.3 Freelances

% value	Size category 3-9	10-49	more than 50	total
% of local businesses that regularly use freelances	69.8	82.9	66.9	70.6
% of freelances over employees of local businesses that use outside help	111.2	54.6	38.5	75.9
% distribution of freelances	100.0	100.0	100.0	100.0
- service marketing	12.3	3.1	1.9	9.5
- additional/specific consultancy	20.0	27.4	6.9	19.4
- service realization	43.2	32.7	89.0	47.9
- performance of operational tasks	24.0	34.7	2.2	22.6
- others	0.5	2.1	0.0	0.7

The flexibility of the work factor is due above all to the contribution of the freelances used by some 70% of firms, with medium-sized companies using a significantly higher proportion: 82.9%.
The percentage ratio between freelances and in-house staff is 75.9% for companies that use freelances and much higher for small companies than medium-sized and large firms. The fact that this figure is similar for the last two confirms that the proportion does not alter with size above a certain threshold.

The firms considered provide work not only for their own staff but also another significant proportion of permanent collaborators working as professionals or very small sole-proprietorships. These two categories of operators, excluded from the survey, thus represent a potential breeding ground from which new structured companies may emerge and a major pool of professional skills to be called upon by companies as when required.
The field of "service realization" provides work for about half of professional freelances. Some 20% are concerned with "carrying out operational tasks" and the same proportion with the "performance of specific additional consultancy services". Only 9.4% are involved in "marketing".
The distribution over different roles differs greatly, however, according to size category.
In large firms, freelances are mainly involved in service realization whereas only a very small proportion of marketing, specific additional consultancy and executive tasks are entrusted to freelances.
Large firms must run their own sales network and operational structures at full capacity before they can give out work.
Medium-sized companies, on the other hand, use more outside help than any other size category to carry out operational tasks and provide specific additional consultancy for service realization. Medium-sized companies therefore offer maximum productive flexibility yet are still self-sufficient in terms of sales.
In the case of smaller companies, on the other hand, freelances help with all tasks and sales in particular.
This indicates that such companies, often the result of the breakdown of larger firms and whose turnover is often made up from a few orders, are still searching for their own organizational identity and mission within the market.

NOTES

(1) G. Rosa and G. Barbieri, Terziario avanzato e sviluppo innovativo, Confindustria, Roma 1987.
M. Martini and U. Vairetti, Terziario avanzato, Assolombarda, Milan 1989.

(2) Momigliano Siniscalco (ed.), Il Terziario nella società industriale, F. Angeli, Milan 1980; Andamenti della struttura del sistema produttivo e integrazione tra industrie e terziario, in Luigi Pasinetti, Bologna 1986

(3) AIL, L'economia italiana e la domanda di terziario avanzato per l'industria, AIL 1982
Irer, il terziario avanzato in Lombardia, Milan, 1978
Unioncamere Lombardia, Offerta e domanda di servizi in Lombardia, 1990

(4) In the broadest sense of the term, the advanced service sector includes some personal services and some collective services: E. Pontarollo, A. Crosti, Il Terziario avanzato in Italia, FTA, Milan 1991

(5) G. M. Martini, P. Aimetti, Un archivio delle imprese per l'analisi economica, Fonti, metodi, resultati, Unioncamere, Milan, 1989.

(6) M. Lancetti, Services Classification System; classification of Services Function. Eurostat 1991, in (Sixth meeting of the Voorbing Group-Helsinki 7th October 1991)

(7) ISCOM, Localizzazione e struttura della attività terziarie, Quaderno no. 23, June-July 1986
E. Pontarollo, A. Crosti (op. cit.).

(8) In the new ATECO 1991 classification derived from CTCI REV 2 and NACE REV 1 the five groups correspond partly to the following items.
1: 74.12, 74.14.1, 74.14.2, 74.14.3, 74.14.4
2: 74.13, 74.14.5, 74.14.6, 74.4
3: 74.5
4: 72
5: 74.2, 74.3

(9) The first 1989 update available at the time the survey was carried out is still provisional.
The final estimates for 1989 (second update), carried out at the time of the first update in 1990, are under publication.

(10) In the province of Milan, a Survey on the labour force (ISTAT) estimated that the number of professionals working within the service field was 30 thousand in 1981 and 70 thousand in 1989, showing an increase of 143.3%

(11) I conti economici della imprese con meno di 10 addetti, 1986-1988, Rome 1992.

(12) The turnover of companies with a staff of 1-2 may be estimated approximately if we assume that staff changes and mean turnover per employee is the same as for companies in the 3-9 employee size category. In this case it amounts to some 1000 billion lire.

Appendix: survey questionnaire

LOMBARD INDUSTRIAL ASSOCIATION
Study Centre

THE SUPPLY OF ADVANCED SERVICES IN THE MILAN AREA

The purpose of this questionnaire is to obtain more information on the quantitative and qualitative characteristics of advanced services offered to companies operating within the Milan area

Compiler's name
Telephone number

SECTION 1: GENERAL INFORMATION

1. LEGAL STATUS:

1 Sole proprietorship
2 Partnership
3 Joint-stock company
4 Other (specify)...

2. DATE COMPANY STARTED TRADING: 19

3. DOES THE COMPANY BELONG TO A GROUP? YES NO

If yes

1 Foreign Group 2 Italian Group

4. DOES THE COMPANY HAVE A PERMANENT COLLABORATION AGREEMENT WITH OTHER COMPANIES? (MORE THAN ONE ANSWER IS PERMITTED)

1. IN ITALY
1. NO
2. YES, with companies in the same group
3. YES, with companies in the same sector
4. YES, with user companies
5. YES, with other companies

2. ABROAD
1. NO
2. YES, with companies in the same group
3. YES, with companies in the same sector
4. Yes, with user companies
5. Yes, with other companies

5. DOES THE COMPANY INTEND TO ESTABLISH FORMAL RELATIONS WITH OTHER COMPANIES IN THE NEAR FUTURE?

1. IN ITALY

1. NO
2. YES, to enhance the supply of services already on offer
3. YES, to extend the range of services offered
4. YES, for other reasons...

2. ABROAD

1. NO
2. YES, to enhance the supply of services already on offer
3. YES, to extend the range of services offered
4. YES, for other reasons....

6. THE COMPANY HAS 1. one premises 2. more than one premises

If it has more than one premises, indicate:

L.B. STAFF

1. Local businesses and staff in the province of Milan

2. Local businesses and staff in Lombardy (excepting prov. of Milan)
3. Local businesses and staff in Italy (excepting Lombardy)
4. Local businesses and staff in the EEC (excepting Italy)
5. Local businesses and staff in European countries outside the EEC
6. Local businesses and staff in the USA
7. Local businesses and staff in Japan
8. Local businesses and staff in other Countries

SECTION 2: COMPANY ACTIVITIES

MAIN SERVICES

SECONDARY SERVICES

3. IN APPROXIMATE TERMS, TAKING YOUR 1990 TURNOVER AS 100%, WHAT WAS YOUR PERCENTAGE TURNOVER WITHIN THE FOLLOWING ACTIVITY GROUPS? (1)

GROUPS
1. FINANCIAL AND ADMINISTRATIVE SERVICES
2. SERVICES TO SALES AND MARKETING
3. HUMAN RESOURCES AND ORGANIZATION
4. INFORMATION SERVICES
5. ENGINEERING AND TECHNICAL SERVICES

SUBGROUPS

of which (2):

1. Strategic consultancy
2. Administrative consultancy
3. Financial consultancy
4. Insurance consultancy
5. Fiscal consultancy
6. Legal consultancy
7. Financial resource organization
8. Planning and control
9. Accounting services
10. Insurance brokerage
11. Auditing
12. Management training
13. Others

of which (2):

1. Sales consultancy
2. Marketing consultancy
3. Public relations
4. Feasibility studies for new products
5. Market research
6. Opinion polls
7. Sales planning
8. Organization of promotional campaigns
9. Advertising campaigns
10. Selling advertising space
11. Direct marketing
12. Organization of exhibitions, fairs
13. Salesforce training, recruitment
14. Sales personnel training
15. Others

of which (2):

1. Organizational consultancy
2. Human resource management consultancy
3. Human resource development plans
4. Human resource assessment
5. Staff search and recruitment
6. Search and recruitment for other staff
7. Management and staff training
8. Training of other personnel
9. Others

of which (2):

1. Analysis and consultancy
2. Software and hardware system design
3. System planning and development
4. System integration (software and hardware)
5. Processing services (data entry, data base etc.)
6. Hardware maintenance
7. Software maintenance
8. Computer personnel training
9. Other

of which (2):

1. Turnkey projects
2. Town planning and building consultancy
3. Environmental and ecological consultancy
4. Other consultancies
5. Tests, checks, controls
6. Product and material analysis
7. Development plans
8. Production system organization
9. Purchases and tenders (preparation of tender documents)
10. Feasibility studies
11. Engineering design
12. Assistance at project development stage
13. System realization and installation
14. Technical personnel training
15. Other

SECTION 3: THE MARKET

WHAT WAS YOUR TURNOVER IN 1990? (in millions of lire)

IN 1990, WHAT PERCENTAGE OF YOUR TURNOVER CAME FROM:

1. The local market (prov. of Milan)
2. The national market (including prov. of Milan)
3. The international market

IN THE FUTURE, THESE PERCENTAGES WILL BE PROBABLY BE:

1. The local market (prov. of Milan)	1. higher	2. same	3. lower
2. The national market (including prov. of Milan)	1. higher	2. same	3. lower
3. The international market	1. higher	2. same	3. lower

IN 1990, WHAT PERCENTAGE OF YOUR TURNOVER CAME FROM:

1. Industrial companies (manufacturers, building, gas, water, electricity etc.)
2. Agricultural companies
3. Private service companies (e.g. credit, insurance, sales, communication, transport etc.) (*)
4. Government departments (State, Commune, Region, etc.)
5. Various associations and organizations

IN THE FUTURE, THESE PERCENTAGES WILL PROBABLY BE:

1. Industrial companies	1. higher	2. same	3. lower
2. Agricultural companies	1. higher	2. same	3. lower
3. Private service companies	1. higher	2. same	3. lower
4. Government departments	1. higher	2. same	3. lower
5. Various associations and organizations	1. higher	2. same	3. lower

INDICATE NUMBER OF CLIENTS IN 1990:

INDICATE PERCENTAGE OF TURNOVER OBTAINED:

1. From first 5 clients   2. From first 2 clients

Note that according to the official classification list the State Railways and SIP [Italian state telecommunications company], for example, are service companies whereas ENEL [Italian state electricity board] is an industrial company.

SECTION 4: ORGANIZATION AND HUMAN RESOURCES

1. INDICATE STAFF NUMBERS EMPLOYED IN LOCAL BUSINESSES WITHIN THE PROVINCE OF MILAN AT 31.12.1989 AND 31.12.1990

	31-12-1989	31-12-1990	of which part-time
1. Businesspeople, partners, family members			
2. Employed managers and staff			
3. Office workers			
4. Other employees			
5. Total			

2. HOW MANY OF THE 1990 STAFF MEMBERS INDICATED IN THE PREVIOUS POINT ARE MAINLY RESPONSIBLE FOR GENERAL SERVICES (ADMINISTRATION, PERSONNEL, ETC.)?

1. Businesspeople, partners, family members 2. Managers, staff, office workers and other employees

3. INDICATE THE NUMBER OF EMPLOYEES IN LOCAL BUSINESSES IN THE PROVINCE OF MILAN (1):

OUTGOING DURING YEAR			INCOMING DURING YEAR		
1989	1990	1991 (2)	1989	1990	1991

4. APART FROM COLLABORATION FOR GENERAL SERVICES, DID YOUR LOCAL BUSINESS(ES) BASED IN THE PROVINCE OF MILAN REGULARLY USE OUTSIDE PROFESSIONAL FREELANCES

1 YES 2 NO

If yes, specify the number:

1. for service marketing
2. for special additional services
3. for service realization
4. for carrying out operational tasks
5. other

(1) Transfers excepted
(2) Forecasts.