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THE DIFFUSION OF PRODUCER SERVICES IN THE URBAN SYSTEM

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- 1 - INTRODUCTION

Traditional theories of the growth of service activities have always stressed the relationships with the demand, while they have almost neglected to analyse the factors which on the supply side affect the competitivity and the growth of service productions. In fact, even empirical researches based on sample surveys have almost always aimed to study the factors which determine the increase in the demand of services by industrial firms. On the contrary, very few empirical researches, both in Italy and in other countries, have aimed to analyse the characteristics of the firms of the tertiary sectors (DANIELS and HOLLY, 1983).

The development of service activities in a metropolitan area does not only depend on the development of the local market but rather on the capacity of the local supply, in the framework of the competition at the national and at the international level with other urban centers. The growth of service activities is especially affected by the existence of specific advantages in terms of costs of production, of quality of the production factors and of the labor force employed, of agglomeration economies, of access to the communication networks, of availability of informations, of local know-how and entrepreneurship capabilities. Therefore, the development of services in a particular urban center depends on the capability of removing the different obstacles which on the supply side may hinder the development of the capacity of exporting services to other areas.

This study aims, first of all, to illustrate some recent theoretical contributions which allow to extend the analysis of the location factors of service activities in the urban centers beyond the limits of the traditional theories, such as the central place model, the export base model or the stage of development theory. While these theories were mainly considering the demand side, recent contributions consider both the factors which affect the demand and those which affect the supply of tertiary activities. Secondly, this study will present the results of two surveys on service firms of various tertiary sectors, aiming to examine the structure of employment in service firms and the process of innovation adoption.

- II -
INNOVATIONS, TRANSACTION COSTS AND SERVICE ACTIVITIES

The relationships between service activities and innovations can be analysed according to three different perspectives (CAPPELLIN, 1983). First of all, the use of new services by industrial firms can be considered as an organisational or a process innovation within these latter firms. Secondly, the production of new services by the existing service firms or the birth of new service firms in a specific area may be considered as a product innovation. Finally, service firms may adopt process or organisational innovations, in order to increase their productivity and/or to improve the quality of the service provided (MOMIGLIANO and SINISCALCO, 1986).

These different relationships between the adoption of innovations and service activities are clearly interdependent among themselves. In fact, the production of new services by a particular service firm does not only represent a product innovation, but it usually requires also the adoption of important process and organisational innovations by these firms. Moreover, the development of new services or the improvement of the quality of the existing services are often a necessary condition in order to expand the use of these services by the industrial firms.

Tightly related to the concept of innovation is a precise definition of the so called "advanced" services. These may be defined as those services which satisfy at least one of the following two criteria. First of all, the production of the "advanced" services should require advanced technological know-how or high skilled labor force or large fixed investments per employees, such as in the case of computer and telecommunication services. Secondly, "advanced" services should be capable to promote the adoption of product, process, organisational and market innovations in the firms using them, as is the case of R&D and consulting services. Clearly some services may be defined "advanced" according to both these criteria. On the other hand, some "modern" services, such as some new personal services, seem not be capable to satisfy any of these criteria and can hardly be defined "advanced" services.

In a post industrial economy, as that of the Western European countries, the main export base activity of an urban center is represented by business service activities. In fact, while manufacturing activities are diffused even in small urban centers, the most qualified business services and also the service functions of industrial firms, such as the headquarters of large manufacturing firms, are usually concentrated in the largest urban centers (CAPPELLIN, 1980).

The input-output relationships of business service activities are rather different from those of manufacturing activities, as inputs of raw material, of intermediate products and of capital goods are much less important for service activities (CAPPELLIN et al., 1987). On the other hand, due to their increasing specialisation, service firms are tightly related one with the others through input and output flows of intermediate services. As service firms provide specialised services to manufacturing firms, they are also tightly related to the internal functions of manufacturing firms,

performing a service activity. Finally, the most important input of service firms compete one with the others in the labour markets of the most qualified occupations. Therefore, the choice of business service firms between the location in larger more than in smaller urban centers or the dual problem of the specialisation of each urban center in the supply of particular services are affecting the characteristics of : a) the transactions of services between different firms, b) the transactions of labour inputs (CAPPELLIN, 1988).

Transaction costs (WILLIAMSON, 1979 and 1981) are usually higher for service firms than for industrial firms, due to the immaterial nature of the output of service firms and due to the need of a tight and active relationship and of bilateral exchanges of informations between the supplier and the user in the process of producing a service. As stocks are almost impossible in the case of services, service transactions are more frequent than those of goods. Service quantity, quality and productivity are harder to be defined and are often uncertain. Therefore, service transactions are usually more complex and require an higher reciprocal trust than transactions of industrial products. Finally, service activities often imply very special human skills and high immaterial, human capital investments which may bind together the buyer and the seller of the service considered.

As transaction costs decrease the lower is the distance between the buyer and the seller or the higher is their concentration in the specific urban centers, cities or central locations have a comparative advantage, with respect to rural or peripheral locations, in those economic activities which, as services, imply high transaction costs.

Apparently the urban concentration of service firms could decrease as the progress in transportation and communications has increased the possibility to export services from a particular center to other even very distant locations. In fact, transportation services, banking and financial services and also consulting services, such as engeneering and management consulting, may be supplied to firms located in other countries, regions and urban centers.

However, it seems necessary to distinguish the exchanges between a service firm and the firms using that service from the exchanges occuring between different service firms, which are tightly interdependent and perform different functions in the joint production of a particular service. Exchanges which are uphill of service production seem to imply greater transactions costs than exchanges which are downhill of service production. In fact, the sources of the inputs of service firms are usually more diversified than the buyers of their outputs. The purchase of inputs by service firms requires frequent contacts with many different firms. Service firms, such as transportation firms, banks or consulting firms require intermediate inputs which should be provided by many other service firms, such as communication, legal, fiscal, technical consulting services, financial intermediaries, research and higher education institutions, etc... Therefore, even when the output of a service firm can be supplied to non local and distant users, the objective to minimize transaction costs on the exchange of the inputs determines the concentration of this firm together with many other service activities in (large) urban centers.

The importance of transaction costs increases the higher is the quality of a service, as advanced services require a tight bilateral exchange of informations also in the execution phase. Therefore, the progress in communications has a lower impact on those services which require frequent "face to face" contacts, while it may make the routine and more standardized services almost "footloose". However, as high quality services and low quality services are tightly interdependent, also these latter services may be led to concentrate in the largest urban centers, since they may have an easy access to high quality services and they can reach peripheral locations using modern communications and computer networks.

- III -
THE STRUCTURE OF TWO EMPIRICAL SURVEYS ON SERVICE FIRMS

Many empirical studies in various countries have interpreted the factors of the development of service activities by analysing the pattern of the demand of services by industrial firms. Other studies have analysed the distribution of service employment or production at the regional or urban level mainly using census data or national account data (CAPPELLIN and GRILLENZONI, 1983 ; CAPPELLIN, 1986a and 1986b). Very few are the empirical studies of service firms, although it seems clear that a thorough analysis of the development of service activities would require a direct investigation of the structure and performance of service firms, as all other sources of informations are certainly either rather indirect and very often inadequate. For these reasons, two empirical surveys on service firms have been elaborated and will be reported in this study. Moreover, two other surveys are currently being undertaken with similar methodology (Umbria et Veneto regions).

The first of these surveys concerns three mayor urban centers of the Lombardy region : Milan, which represents the largest urban center of the regional urban system, Como which is located in an old industrialised area and Brescia which is located in an area of more recent industrialisation (BOSCACCI and CAPPELLIN, 1987). This survey consists in the direct interview of 207 service firms belonging to the following sectors : 1) trade intermediaries of industrial machines and materials, 2) transport and custom services, 3) accounting and fiscal consulting services, 4) technical services, 5) advertising and public relation services, 6) marketing services, 7) management consulting services, 8) software and computer services, 9) private research services. The data refer to the situation existing at the beginning of 1986. The size of the firms interviewed correspond to the average size of the service firms in the Lombardy region and is rather limited since 56 % of them have less than 6 employees.

The second survey, elaborated within the Milan Project (CAPPELLIN and POLO, 1987) concerns only the Milan Metropolitan Area (MMA). Also in this survey data refer to the situation existing at the beginning of 1986. However, this survey differs from the previous one as the questionnaire is much more detailed and the firms interviewed may be considered as the "leader" firms in their respective sector according to the opinion of experts, due to their size and growth rate. Therefore, the average size of these firms is much larger than that of the survey on the Lombardy urban centers and all firms have more than 50 employees and in various service sectors the firms considered have more than 100 employees.

The sectors considered have been choosen in order to represent all the productive branches, according to which the tertiary activities are classified by the Italian Official Statistis (ISTAT). In particular, the following sectors have been considered : 1) large food shops, 2) large department stores, 3) cloth shops, 4) computer shops, 5) cathering services, 6) trading companies, 7) truck transports, 8) tour operators, 9) banks, 10) factoring services, 11) leasing services, 12) insurance brokers, 13) software services, 14) administration consulting, 15) certified accountants, 16) advertising services, 17) marketing services, 18) engeneering services.

The questionnaire of this survey has considered the following aspects of the structure of service firms : the characteristics of the founder, the mode of the firm birth, the mix of services produced, the characteristics of the customers, the problems faced in the adoption of innovations, the structure of employment, the characteristics of hired and dismissed workers, the procedures of labour training, the forms of collaboration and joint-ventures among service firms, the factors of the firm location.

- IV -
THE CHANGES IN THE DEMAND OF SERVICES

The development of service activities is certainly affected by various factors which determine the demand of services by industrial and also tertiary sectors.

According to the product life cycle theory, the different ages of the particular products determine a different importance of particular production factors. It is interesting to observe that the typology of these factors seems rather similar to the typology of service activities classified according to the function which they perform in the hierarchical organisation of the firms.

In fact, in the "initial phase" of the product life cycle, a strategic role is played by "orientation services", which are connected with the identification of the long term prospects of the firm, of technology, of markets and of the local environment, such as the R&D services or other "advanced" consulting services. In the "development phase" of the product life cycle, the crucial services required are technical, organisational, financial and marketing services, which may defined as "planning services". These services aim to implement the strategic objectives which have been decided in the orientation phase of the decision making process. Finally, in the "maturity phase" of the product life cycle, a crucial role is played by "programming services", which are routine services connected with the daily organisation and control of the production process, such as production, personnel, accounting, buying, selling and transport services.

Various studies on the location of service activities have indicated that each of these three types of services requires different types of contacts (face to face, telephone, mail, computer networks, etc...). Therefore, each of these three types of services has a different optimal location pattern within the various centers of the urban hierarchy of a region or a country (GODDARD, 1975).

In fact, "orientation services" tend to localise in the metropolitan areas, where "face to face" contacts with many different economic agents are more easy. "Planning services" tend to locate in medium size urban centers, as they require frequent contacts among a more limited number of agents, which often are internal to the individual firms or belong to the different firms of the same sector. These urban centers often are the main urban centers industrial specialised districts and are characterised by the development of a set of very specialised producer services. Finally, "programming services" can be localised even in small urban centers of peripheral regions, near to the production plants and/or to the final markets, since they require a lower volume of informations, mainly concerning frequent transactions between these plants and the respective clients and suppliers.

The existence of specific location factors for each of these services and the strategic role of these latter in the development of specific productions indicates that the relationship between the demand and the supply of services has an interdependent character. In fact, on the one hand, the technological characteristics of local productions affect the type of services which are demanded. On the other hand, considering the supply side, the existence of particular services in particular areas is affected by the local availability of specific factors, affecting the location of the particular service considered. Therefore, the existence of an adequate supply of specific service may represent the necessary condition in order to develop particular new industrial productions and to reconvert the local economic system from traditional to other technologically more advanced productions (CAPPELLIN, 1986b).

A second type of factors which may affect the demand of services is related to the forms of the relationships among the various firms within a regional economy. In fact, the crucial role of service activities is to establish links between the different production units and their respective suppliers, their competitors and their markets. An higher division of labor among the industrial firms implies a tighter network of relationships among these firms and an increased role of service activities. In fact, the role of producer services is similar to that of transportation services, as even they aim to overcome the distance between the different firms, by establishing networks of financial, technological and commercial relationships among these firms. The forms of these relationships among the firms may be different, ranging from direct financial partecipation, to family relationships among the respective entrepreneurs, to informal and temporary agreements, to sub-contracting, etc...

In particular, a factor affecting the form of these relationships and the demand of services consists in the development stage of the local economy considered. In fact, in an initial phase of the development process, the firms are weakly integrated one with the others, as it is indicated by the case of the Italian Mezzogiorno. Therefore, strategic services are those which organize the relationships between the local firms, for example specialised in the sectors of construction or of agriculture, and their respective local sources of raw material and the local markets of their outputs, such as transport and retail trade services.

In an intermediate development phase, when specialised industrial districts become important, as in the case of the "Third Italy" (FUA' and ZACCHIA, 1983), the strategic function of services is to organize the complex flows of intermediate products among tightly integrated firms. Communications and wholesale services and especially internal services within the industrial firms become the most important services in these areas.

In fact, in these areas characterized by small and medium size firms, the relationships among the firms are often organi ed in an informal way and the supply of services is often not organized by market relationships but by a system of social relations and by various types of public or cooperative institutions. For example, labour training is mainly based on learning by doing and the know-how is diffused through the frequent mobility of skilled workers among the firms whithin these industrial specialized districts. Financial relationships are also affected by family and friendship relationships among the entrepreneurs. Technological innovations diffuse through a gradual process of imitation of the technology adopted by the firms which are more advanced.

Finally, when a local economy enters in a post-industrial phase, as in the case of large metropolitan areas, such as the Lombardy region, the crucial flows among the firms do not seem to be the physical flows of inputs and outputs but the immaterial flows of financial resources and the flows of informations on new technological opportunities and on the evolution of markets. The relationships of the firms expand both in an intersectoral and in an interregional perspective. The crucial objective of the firms becomes the fast access to process, product, market and organisational innovations, rather than the achievement of economies of scale through a better production integration with other firms, as it was the case in an intermediate phase of development.

In this third phase of development, the growth of new producer services determines "urbanisation economies" for the local firms, while it decreases the role of "localisation economies", within a particular sector of specialization as it promotes a greater sectoral diversification of the local economy. In fact, new advanced services may promote cooperation agreements with non local firms and facilitate the access to new markets and to new technologies, thus decreasing the role of the flows of intermediate products within the individual sectors of the local economy.

When the local economy becomes more developed and the problems created by the increasing international competition and by the fast change of technology become crucial, then, the internal organizations of the firms becomes more complex and the demand of services increases. Therefore, service functions which were originally performed by the entrepreneur himself are delegated to service workers within the firms and services, which were obtained through informal contacts with other firms or with public institutions, are bought through market transactions from external specialised firms. Therefore, the growth of services is mainly due to a process of increasing division of labor, rather than to the growth of completely new service functions.

The two empirical surveys indicated above confirm the importance of demand side factors of the development of service activities. However, contrary to a widely believed opinion, according to which services would be mainly demanded by large firms, the survey on Lombardy urban centers indicates that the most important customers of the service firms interviewed are first of all the medium size industrial firms and then the tertiary firms, the small industrial firms, the large industrial firms and the public administration. From the sectoral point of view, the industrial sectors are the most important customers of the service firms (56 %). However, the service sectors are also rather important and are indicated by 42 % of the firms.

The survey on the Milan Metropolitan Area (MMA), differently from that on Lombardy, indicates that for the "leader" service firms interviewed the demand by industrial firms is very important and it exceeds 75 % of the turnover for the sectors of truck transports (88 %), leasing (86 %), cathering (81 %), insurance brokers (76 %), and it exceeds 50 % for the following sectors : engeneering (73 %), advertising (73 %), trading companies (65 %), factoring (61 %), accounting (56 %), and marketing (52 %). Moreover, the customer firms with more than 200 employees represent on average 57 % of the turnover of the service firms interviewed. Low values are indicated only by the computer shops (13 %), administration consulting (10 %), leasing (9 %) and factoring (5 %). Also the receptivity of the customers to the supply of new services seems to be higher for industrial sectors (62 %) and for large firms.

These results seem to confirm that the technological level of the customers affects the demand of services. Moreover, the role of demand by industrial firms and large firms seems to increase the larger is the size of the services firms considered.

- V -
PRODUCT INNOVATIONS AND BIRTH OF NEW FIRMS

The growth of services does not authomatically follow the growth of the demand in the individual areas considered. In fact, the continuous technological progress in communications allows an urban center to produce services not only for the local firms but also for firms located in other rather distant areas. Therefore, the demand of qualified services, necessary in order to innovate the production processes in a particular area, may be satisfied by service firms located in other areas. One the other hand, a particular urban center may develop the supply of particular services to a larger extent than that required by the demand of the local firms as these services may be exported to other areas. In other cases, various obstacles on the supply side may hinder the growth of service firms, notwithstanding the level of local demand and this latter may be satisfied by the import of services from other areas. Therefore, it is important to analyse the factors which, on the supply side, affect the birth and the competitivity and growth of the production and export of services (BAILLY et al., 1985).

According, the survey on Lombardy, only 23 % of the firms have exclusively a local market. 24 % of the firms sell more than 2/3 of their turnover outside of their respective province, 45 % sell more than 1/3 outside of their province. 48 % of the firms sell also to other regions and 15 % also abroad. The share of exports is significant and on the average equal to 7 %. It achieves high values for the trade intermediaries of industrial machines and materials (25 %). However, the export propensity is not homogenous for all the three urban centers considered, but it is larger for Milan and Como than for Brescia.

According to the survey on the MMA, sales outside the MMA represent 56 % of the turnover, on average. Important exceptions are represented by some sectors for which the local market is very important : insurance brokers (51 %), software services (53 %), marketing (57 %), computer shops (72 %), large foods stores (85 %), administration consulting (89 %). On the contraru, for trading companies (88 %) and engeneering services (49 %) exports are very important.

The demand and the supply of producer services may become rather autonomous one from the other, since the demand of services by the local firms, especially the large ones, becomes oriented toward service firms external to the area considered, while local service firms may be capable to export significant shares of their turnover toward other regions and also abroad. These results disprove the widely believed opinion according to which services are mainly oriented toward the local market.

Another widely believed opinion is that service sectors would be not very innovative. On the contrary, the survey on Lombardy indicates that the firms interviewed consider as very important for their competitivity the adoption of innovations, such as product, process and organisational innovations. Moreover a large share of them (42 %) has adopted some type of innovations in the last three years. The innovation level increases for larger firms, however it is not significantly different in the three urban areas considered.

The survey on the MMA indicates that the adoption of innovations represents a strategic factor in determining the competitivity of service firms. In particular, the most important forms of innovations are represented by : 1) the production of new services (30 %), 2) the sale into new markets (25 %), 3) the adoption of new processes (24 %), 4) the organisational changes (21 %). These results indicate the great importance in the service sectors of non price competitivity factors with respect to the price competitivity, as qualitative changes in the characteristics of services may be more important than quantitative changes in production costs.

The most important obstacles to the introduction of new services can be found in the low initial receptivity of the customers (31 %) and on the other hand in the problems faced in evaluating the potential demand (24 %). Only in the case of leasing and of computer shops, important obstacles derive from financial problems and, in the case of engeneering and truck transportation, from project elaboration costs.

Various factors affect the adoption of product innovations. These latter may be consist either in the introduction of new services by the individual tertiary firms or in the birth of new service firms in a specific urban area.

The introduction of new services is related to the fact that each service firm usually produces a set of different services, which are tightly interdependent as they are complementary in their production or in their use. Even industrial firms always jointly produce both goods and services, as each industrial firm employs workers which produce services as accounting, personnel organization, research and development, marketing, etc...

The integration of different services within the same firm depends on the existence of "economies of scope", which may be defined as the situation when the cost of production for all outputs is less than the cost of producing each output separately (TEECE, 1982).

Economies of scope, often occurr due to the optimization in the use of a common resource in two different productions. In fact, the access to common sources of informations, the exploitation of a particular common technological or organisational know-how or the access to particular common services and infrastructures may explain both a decrease of production costs and the urban concentration of various service activities. Moreover, as economies of scope may determine a decrease of the price of the individual services, they may promote the urban concentration of the users of these services.

The economies of scope may exist not only in the production costs but also in the costs of marketing of different services which are tightly complementary. In fact, the use by a firm of different complementary services, produced by a single other firm may imply an important saving of transaction costs, connected to the procedures of negotiating and executing of these services. Similarly, the use of complementary services produced by various firms all localised within the same urban center, may facilitate the exchanges of informations between the firms producing these services, thus promoting a better reciprocal integration and a greater effectiveness of the services considered in solving the problems of the firms using them.

According a widely believed opinion the creation of new firms would be especially related to the process of externalisation of services which were previously produced in other firms, such as less specialized service firms or industrial firms. This process is related to the role of economies of scope. In fact, economies of scope, in the joint production of services with other industrial or service outputs, may become lower than economies of scale, to be achieved when the production of services is concentrated in few specialized firms.

This process of externalisation of services, previously jointly produced or integrated with industrial production, may lead to the "filtering upward" (PRED, 1988 ; NOYELLE and STANBACK, 1984 ; CAPPELLIN, 1986b) of some services in the urban hierarchy. In fact, small cities may lose some high quality services, which were previously produced within less specialized and traditional service firms or within industrial firms localised in these cities, if these services are increasingly concentrated in large cities, for example due to acquisition of small local firms by large multiregional firms.

According to a different interpretation the birth of new service firms is not due to the aim of a greater exploitation of economies of scale and to changes in the organization of production. On the contrary, it may consist in the spin-off from the original firms of entrepreneurial initiatives, which become completely autonomous with respect to these firms, as the new services may be sold in new markets and to new users. In this case, the birth of new service firms responds to the aim of exploiting technological and organisational competences, which have been developed within the original firms.

Therefore, economies of scope may also be interpreted in a dynamic framework as a factor explaining the process of diversification of the production of a firm or the growth of new sectors in an urban economy. In fact, the existence of a particular know-how in the production of a specific service by a tertiary firm but also by an industrial firm or by a particular urban center, may imply lower costs in the production of specific new services, thus facilitating the entry by the original firm into new markets. These dynamic relationships between two different services seem rather similar to the complementary relationships explained by economies of scope.

In fact, the existence of tacit elements in the technology used, of learning by doing factors and of internal organisational routines usually hinders the transfer to new firms and to different urban centers of the know-how learned in the specific productions within particular firms or urban centers. In these cases, the identification of the new possible applications of a particular know-how is easier within the same firm or the same urban center, as it is not necessary to reveal to others particular production secrets and appropriate human resources may be more easily transfered from old to new productions (TEECE, 1982 ; AYDALOT, 1986).

Both surveys elaborated disprove the widely believed opinion that service firms are normally created as externalisation of service function previously produced within industrial firms. On the contrary, they indicates that entrepreneurship in service sectors mainly derives from other service firms and only in few cases from spin-offs and process deverticalisation by industrial firms.

According to the survey on Lombardy, the birth of tertiary firms due to the externalisation of functions of other firms represents a very rare case (5 %), which is relevant only in the sectors of technical services, of informatics and of administrative consulting.

According to the survey on the MMA the new services are almost always (86 %) complementary with respect to those which were already produced in the respective firms. Moreover, the birth of new firms seems to be the effect of the start of new activity by a single entrepreneur (48 %) or of the diversification toward new production of firms which were active in other sectors in the same area (18 %). Rather important (18 %) is also the creation of firms by other firms active in the same sector but in different areas, as it is indicated by the case of the location of branches of various international service firms. Only few firms (6 %) have been born as the externalisation of services previously produced in already existing industrial or tertiary firms.

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PROCESS INNOVATIONS AND ORGANISATIONAL CHANGES

Another important type of innovations in the service firms is represented by the adoption of process or organisational innovations. The most important obstacle to these types of innovations does not consist in the financial cost of new investments (16 %) but in the need to requalify the personel (29 %), in the resistances to the modification of organisational routines (23 %) and in the need to hire new qualified personel (16 %). Therefore, a crucial factor, which explains the capability to innovate and the competitivity of the service firms is given by the availability of high qualified labour resources and their appropriate organization modes.

The survey on Lombardy indicates that, notwithstanding the widely believed opinion that tertiary firms should have a rather simple internal organisational structure this latter is rather complex, since an high share of firms (between 25 % and 50 %) internally produce the following services : research, personnel selection, economic studies and marketing research, organization, professional training, accounting, advertising and public relations.

Another widely believe opinion is that the qualification of the labor force should be lower in tertiary firms than in industrial firms. On the contrary, the survey on Lombardy indicates that 75 % of the entrepreneurs has at least an high school degree and 40 % has an university degree.

Also according to the survey on the MMA the university degree is the most common education level of the entrepreneurs in all the sectors considered (42 %). The high education level of the labor force in service firms is also indicated by the fact that the overall share of entrepreneurs, managers and employees with university degree in most sectors is greater than 30 %. Moreover, the turnover ration (hired + dismissed / employed workers) in the last four years is rather high and it is 120 % in accounting and advertising firms and 80 % in computer software firms.

The market of high skilled labor force active in the tertiary sectors is a typical case of segmented labor market. In particular, the urban centers, especially those which dominate the urban hierarchy, are characterised with respect to rural areas and smaller urban centers, by the concentration of high skilled workers, such as entrepreneurs, managers, consultants and various other professional profiles in service and in industrial firms.

This concentration of high skilled workers in urban centers may be explained by factors which are specific to the working of the labour market and which have a microanalytic rather than a sectoral character. In this respect the concentration of high skilled workers in urban centers may represent a factor, rather than the effect, of the urban location of particular economic activities.

In fact, the growth of service activities depends, first of all, on the existence of appropriate entrepreneurial capabilities in the various areas, as the total employment in service sectors is made especially by selfemployed workers. Moreover, the spatial mobility of entrepreneurs and of the firms in the service sectors is rather limited, since service activities are linked to the local environment more than industrial activities, due to technical and institutional reasons. In particular, the creation of new service activities depends on a gradual process of learning by doing occurring in traditional service activities, as entrepreneurs of new service firms often have been working as employees in other tertiary firms or in the headquarters of industrial firms. Therefore, the urban labor markets of high qualified workers have the typical characteristics of the "internal labor markets" (DOERINGER and PIORE, 1971).

The service sectors have an internal hierarchical structure, since the workers and the firms may be distinguished in different levels, of which some have an operational and routine function and concern the production of services of lower quality, while others have strategic roles and produce services which are more complex and technologically advanced. Secondly, these markets are rather closed with respect to the outside world, since it is possible to enter in these markets only at the lowest levels of their hierarchical structure. The mobility from and to firms of other sectors and of other urban centers is very limited, while the mobility from firm to firm within the same sector and within the same urban center may be rather high.

These characteristics of the urban labour markets of skilled workers may be explained by three factors which have been indicated by the theory of the internal or dual labor markets : 1) these occupational profiles are very specific with respect to the individual environments considered, 2) the professional skills are learned through on the job training, 3) the internal organisation of these labor markets is regulated by specific rules for each professional profile.

The results of the two empirical surveys confirm the hypothesis that the characteristics of the labour markets of service activities are similar to that indicated by the theories of the internal or dual labour markets. In fact, the segmented nature of the labour market of service activities is confirmed by the fact that, notwithstanding the high mobility from one firm to the other, a very large share of the entrepreneurs originate from other service firms.

The survey on the MMA indicates that the originating sectors of the entrepreneurs are very often other service sectors (75 %). Only for software (50 %) and engeneering (50 %), the previous professional experience has occurred to a large extent in industrial firms. Also this result confirms the low importance of the externalisation process of service functions, which were previously performed within industrial firms.

Also in the Lombardy survey the most common origin (69 %) of the entrepreneurs is the need that of selfemployed or dependent worker in the tertiary sectors. Less important is the origin as employee in industrial firms (16 %). This latter origin is more common in the case of technical services and of private research services. Moreover, the spin-offs from industrial firms are more common in Milan, where internal services of industrial firms are more important, than in Brescia and Como.

These results on the sectoral origin of the entrepreneurs may be explained by the fact that according to the survey on the MMA the most important characteristics demanded to new hired workers is the knowledge of the problems of the sector (30 %). Another important requirement is the level and length of the previous work experience (23 %). Moreover, the most important mode for professional training in the case of entrepreneurs and other high qualified workers is represented by the one the job experience (39 %), and the organization of internal courses (23 %), especially in the largest firms (more than 250 employees). These results confirm the importance of on the job training with respect to formal education curricula.

The flexible internal organisational structure of the service firms indicates the need that the individual workers demonstrate an adequate autonomy in their work. In fact, among the most demanded requirements to new hired workers is the inventive and coordination capability (23 %), especially in software and certified accountant services, where the share of employees with university degree is important.

Also according to the survey on Lombardy, the most commonly used mode of professional training is the one the job experience, integrated with internal education courses in the case of large firms. On the contrary, in smaller firms the relationships with customers and other firms are considered as especially important.

The theories of internal and dual labor markets may explain why young workers are attracted to large urban areas. In fact, these workers are attracted by the high internal mobility and the better carrier prospects which characterize the labor markets of these areas. Therefore, positive characteristics of the physical, social and cultural environment may facilitate the immigration of qualified workers in the urban centers and the development of service activities which require this type of labor force. In particular, these characteristics of the urban labor markets seem coherent with the indications of the "incubator hypothesis", according to which new firms, especially in the high technology sectors, prefer a location in urban areas during the first phases of their life (LEONE and STRUYCK, 1976).

– VII –
THE SUPPLY OF SERVICES AND THE ECONOMIES OF AGGLOMERATION

The growth of services in an area depends on the demographic and employment size of the urban center considered, not only because a greater size indicates greater revenues and greater demand of the services considered, but also because this indicates the existence of greater external economies, which are determined by the existence of appropriate infrastructures, by the contiguous location of numerous service and industrial firms and by the possibility of access to a larger market of qualified labor.

As indicated above, one of the most important inputs of service firms and also one of the most important factors affecting their location consists in the inputs of other services and in the transaction costs required by these exchanges of services between different firms.

Since service firms require a tight and active relationship between the supplier and the user of a service, geographical distance and communications costs have a greater importance in affecting the exchanges of services, than in the case of industrial products. Therefore, the objective to minimize the transportation and communication costs implies the urban concentration of services.

However, the exchanges of services imply also important transaction costs, which are different from transportation and communication costs and which should also be minimized as these latter. Transaction costs are affected by the level of geographical concentration, as they are related to the reciprocal knowledge, to the similarity of language, culture, technological level and socio-political institutions existing between the two parties of a transaction of services.

In particular, the respective advantage of an urban concentration of service activities with respect to a greater spatial diffusion may change according to the evolution of technology and the changes in the characteristics of the relationships between the service firms and the other firms supplying inputs or buying their outputs (CAPPELLIN, 1988).

These factors may be particularly important in explaining the location of new service firms, since these latter may prefer a location in smaller urban centers, if the transaction costs incurred in their contacts with their respective suppliers and users were lower in smaller centers than in large urban centers. On the contrary, the concentration in a large urban area may be more usefull for those firms, which are older and which normally produce technologically more advanced services. In fact these services usually require more complex relations among the various suppliers and users. Thus, their concentration in large urban centers is important in order to minimize transaction costs.

Milan represent by far the most important concentration of service activities in Lombardy. However, the process of diffusion of service activities is confirmed by various indicators, beside the analysis of the employment changes in the two census 1971 and 1981. In fact, the survey on Lombardy indicates that firms where new hired workers in the last three years represent 100 % of the employed workers have been 39 % in Como, 35 % in Brescia and 30 % in Milan. This latter center presents an higher share (31 %) of firms with low rate of hired workers (less than 25 %) than Como (10 %) and Brescia (6 %).

The firms interviewed are often rather young, since 55 % has been founded after 1975 and 29 % after 1980. However, the firms founded after 1980 are more frequent in Brescia and Como than in Milan. The average age of the entrepreneur, when the firm is founded, is between 31 and 40 years old (42 %). Como is the area which indicates the highest share of entrepreneurs less than 30 years old and Milan the area with the highest share of entrepreneurs more than 31 years old.

The importance of economies of agglomeration is indicated by the level of integration among service firms, as the increasing integration between service and industrial firms is accompanied by an increasing integration among the service firms themselves.

The survey of Lombardy indicates that 40 % of the firms use inputs of "advanced" services and that 80 % of these firms consider this use as a strenght points of their competitive strategy. The external use concerns not only services, which the firms interviewed are not capable to develop autonomously, but also services, which are internally produced by these firms.

This survey indicates that services which are most commonly used are rather traditional services, such as legal services (83 %), fiscal (73 %) and cleaning (69 %) services. However, there are numerous firms which use external services more rare, such as computer services (25 %), professional training (18 %), certified accounting (23 %), advertising (28 %) and technical services (20 %). Very low percentages of use are those of personel recruitment and selection, management organization, financial control and public relation services. The use of external services is more common in Milan, although the percentage of use are not very different from the other areas. This may be due to an higher technological level of service firms in the Milan area and to the clearly higher availability of services in this area : a factor which may facilitate the use of these services.

As indicated by various surveys on the demand of services by industrial firms, also this survey on service firms indicates a positive relationships between the number of the services used and the size of the firms. In fact, all firms with more than 20 employees use more than 8 external services, while only 36 % of the firms with 2-3 employees use more than 8 external services. Moreover, the empirical results confirm the hypothesis that a greater size of the firm does not imply a decrease of external services and a substitution with internal services, as the use of external and internal services appears as complementary.

The intensity of the relationships with the external environment is also indicated by the use of external collaborations. The flexibility of the labour organization, which characterizes service firms, allows complex links between the functions performed by employees and those performed through the collaboration with workers external to the firms. In fact, external collaborations represent an important share of employees (30 %) in many firms (40 %) and for 19 % of the firms the number of external collaborations is greater than the number of employees. However, many firms do not use external collaborations (41 %). This result should not be interpreted as the effect of the decentralisation of the most routine functions, as the sectors where external collaborations are most important are rather qualified, such as marketing services, organization consulting, technical services and private research services. Therefore, it seems that rather qualified activities are forced to search outside of the firms professional capabilities which are rather rare and may not be easily organized in the framework of a contract of dependent labour.

- VIII -
STRENGHT AND WEAKNESS POINTS OF SERVICE FIRMS

It is possible to analyse the crucial factors in the growth of service firms by analysing the strenght and weakness points indicated by the firms interviewed in the two surveys. In the survey on Lombardy, the strenght factors are first of all the quality of the service produced (99 %), then the inputs of advanced services (79 %), the large scope of the services supplied (76 %) and the price levels (70 %). On the contrary, strenght factors, indicated by a lower number of firms, are the search of employees (41 %), the search of customers (46 %) and the financement of activities (52 %). The order of importance of these factors is rather similar for all service sectors considered.

Therefore, it seems that the qualitative characteristics of the service supplied are rather high, but the greatest problems are to be faced in the labour market and in the markets of the specific services, where the firms face important transaction costs in their relationships with the clients and various obstacles hinder an adequate circulation of informations on the characteristics of the demand and of the supply of services.

The strength factors indicated by the firms interviewed in the survey on the MMA confirm the importance of non price factors in the competition on the markets of services. In fact, the strength factors consist in the high quality of services (31 %), in the large scope of the service supplied (18 %) and in the customisation of services supplied (16 %). These results demonstrate the importance of processes of horizontal and vertical product diversification (POLO, 1986) and of the need to introduce services which are complementary to those already supplied in order to exploit the existence of economies of scope. In all these cases it seems that an important factor is the control of the transaction costs in the relationships between the supplier and the user of services, since the quality of a service seems to consist mainly in the correspondence between the characteristics of the service supplied with the need of the users.

On the contrary, the weakness points indicated in this survey are the low price competitivity of the services supplied (23 %) and the inadequate capabilities in advertising and public relations (24 %). Also these results indicate the importance of non price factors, which should compensate the greater costs characterizing the "leaders" firms interviewed in the survey on the MMA with respect to the smaller firms interviewed in the survey on Lombardy. The low transparency of the demand is indicated both as an obstacle to the introduction of new services and by the lack of advertising and public relations, and it is certainly related to the importance of transaction costs and to the imperfect circulation of informations in the market of services.

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CONCLUSIONS

The results of these two surveys on the service firms may be considered as rather representative of the problems and trends of the development of service activities in Italy, due to the relative high development level of the urban areas considered and the wide spectrum of the sizes of the firms interviewed. Certainly, these results seem to disprove various widely believed opinions on the characteristics and factors of the development of service activities.

In fact, the development of service activities is tightly related to the adoption of process and organisational innovations by the firms, which are using the services, and with the adoption of product, process, and organisational innovations in the service firms.

The demand of services is related to the technological level of the firms and to the stage in the product life cycle which characteristics these firms. However, it is also related to systemic factors, such as the forms of the relationships linking among themselves the various firms, using the services, and the modes of organization of the various industrial sectors and of the overall regional economy.

The local demand is not an adequate explanation of the development of service activities in the different areas and service firms export a large share of their output outside their respective area of location. Therefore, the growth of service activities, as in the case of industrial productions, should be related to the quality and costs of the services supplied by the various areas in the framework of an increasing interregional and international competition.

The competition in the market of services is mainly based on non price factors. The improvement of the quality of the existing services and the introduction of new services have a crucial role. These factors may be more important than the economies of scale and the costs of transportation, which have usually been considered by the traditional theories on the growth of services, such as the central place theory (MULLINGAM, 1984 ; PRED, 1977).

The adoption of process and organisational innovations is rather frequent in service firms, notwithstanding a supposed lower productivity of service activities. The adoption of these innovations is mainly related to the characteristics of the labour market of service activities, which presents the typical characteristics of the internal and dual labour markets.

These empirical results seem to indicate that the development of service activities corresponds to a pattern of "endogenous growth" (CAPPELLIN, 1983). In fact, service firms mainly arise as spin-offs from other service activities and from the development of local entrepreneurship capabilities. Their growth is promoted by the tight interdependance existing among the service firms within the same urban area. However, the growth of new service firms may be greater in smaller urban centers, due to the existence of agglomeration diseconomies. The growth of new services is related to the valorisation of the know-how which has been accumulated in specific sectoral productions, which characterize the particular area considered. Therefore, it is possible to promote a specialisation of the various urban centers in different type of services and a non hierarchical distribution of service activities among larger and smaller urban centers.

Regional and national policies should mainly aim to stimulate the local supply of services, to qualify the local labour force, to promote the valorisation of the local entrepreneurship capabilities, thus aiming to stimulate the birth of new local service firms, rather than aim to achieve an unfeasible relocation of the services already existing in some areas toward the less developed areas.

The empirical results of these two surveys seem to confirm the explanatory power of the recent theoretical contributions which have been indicated in this study. In particular, they seem to indicate three fields which seem worth further research : 1) the widening of the market area of the service activities and the need to study the interaction between local capabilities and external stimulus in the framework of an increasing internationalisation of service firms, 2) the segmented characteristics of the labour markets of service activities, which are rather different from the labour markets of industrial activities, 3) the very imperfect circulation of informations between producers and users of services and the importance of transaction costs in the exchanges occurring in the market of producer services.

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RESUME

L'étude analyse quelques approches théoriques récentes qui expliquent non seulement la demande mais aussi la compétitivité de l'offre des services. L'étude démontre que différents mythes sur le secteur tertiaire ne correspondent pas à l'évidence empirique. La demande de services des petites entreprises tant industrielles que tertiaires est plus importante que celle des grandes entreprises. Les services sont toujours plus exportés vers d'autres régions et ne sont pas seulement destinés à l'économie locale. L'adoption des innovations de produits et de procédés est très diffuse parmi les entreprises de services. Les entreprises de services se développent surtout par essaimage à partir d'autres entreprises tertiaires et pas comme externalisation des fonctions de services des entreprises industrielles.

SUMMARY

The study analyses recent theoretical approaches which explain not only the level of demand but also the competitivity of supply of services. The study demonstrates that various mythes on the service sectors are contradicted by empirical evidence. The demand of service by small industrial firms and by service firms is more important than that of large firms. Services are increasingly exported to other regions and countries and are not only addressed to the local economy. The adoption of product and process innovation is very diffused in service firms. Service firms mainly grow as spin-off from other service firms and not as externalisation of service functions from industrial firms.