Some theoretical reflections on the relationship between city and business

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West European cities have always played a major role in the economic development of regions. They have been and still are today the obvious places for trade and industry which in turn grants them a certain amount of influence over the surrounding space at a very early stage.

This contribution takes a look at the special locational relationship between the city and its economic activities. Three main issues will be discussed. First, we will analyze the trends in the location of the economic activities in the city centre. In this section we distinguish the urbanization process into four major phases. Second, the economic activities are divided into two categories according to their specific locational behaviour. Finally, we will use a number of criteria to evaluate a location in the city centre.

1 Trends in the location of economic activities in cities

The industrial revolution in England in the second half of the 18th century and on the continent in the first half of the 19th century reinforced the economic significance of the urban regions. The rapid shift from a rural and artisan industry to a more mechanized industry transformed the city. The emphasis, as pointed out by Adam Smith (1776), was placed on the introduction of specialization and the division of labour. Railways and waterways became more important because the economic

(*) With special thanks to Ann Verhetsel (UFSIA) and Dirk Yzewyn (UFSIA) for their useful remarks.

activities had to be concentrated in accessible regions. Regions also needed to be equipped with a reliable power-system and had to provide manufacturers with enough labourers since workers could not afford to travel great distances. As a result of the industrial revolution production rose tremendously and the standard of living improved. More economic activities were concentrated in the city centre. Cities began to expand and the gap between urban and rural areas became more apparent.

At the end of the 19th century and until the beginning of the second world war the population increased. As a result, *urbanization* turned into *sub-urbanization*, which meant that the city centre de-concentrated. A number of citizens, mostly those who were well-off, chose to leave the city core and moved towards the peripheral regions (W. De Lannoy, 1987, p. 33). The introduction of public transport and the rise in wages were also partially responsible for this movement. In most European countries the sub-urbanization of companies started after the second world war. The principal reasons for this were the overall growth of the economy, the lack of available space within the city and the city's growing congestion due to the increase in private car-ownership.

In the nineteen-sixties, however, there was an important move out of the city of economic activities, both in the industrial and service sector. Some existing as well as recently established firms (re)located to new buildings near motorways in the peripheral regions rather than in the city centre. This gave an initial impetus to what has later been known as the *ex-urbanization* of economic activity. Ex-urbanization is characterized by the fact that companies leave the city for the peripheral regions, thus contributing to the increase in inner-city wastelands. In the 1960s ex-urbanization was restricted to a small number of enterprises and coincided with a parallel movement of people towards the periphery of the city. This led to the belief that in many cases the economic power of the city was reduced, so that its influence on the economic organization was also diminishing.

There are several major factors of a general nature which characterize the period (1960 until 1975, slackening influence since 1975 but reinforced again since

1985) in which ex-urbanization took place. Important investments in transport infrastructure and the development of more efficient transport systems reduced the firms' average transport cost. This gave companies a wider choice of suitable locations and made a possible relocation away from the city core easier. The profound modifications in production and the commercialization and organization of employment were also responsible for the ex-urbanization of economic activities. Furthermore, the internationalization of the economy enhanced the idea that companies did not have to be located in the city centre in order to operate successfully.

The way in which the industry, at that time, viewed the city centre as a possible location site, is best summarized by P.E. Lloyd and C.M. Mason (1978, p. 68-69). They argued that the inner city became "at best, an unattractive and, at worst, a hostile economic environment for manufacturing". This was because the traditional advantage of access to the market, labour and agglomeration economies had become less important (D. Smith, 1981, p. 430).

In many cases the industry was partially responsible for the ex-urbanization. However, politicians, too, were to blame. Through financial and fiscal aid to companies they implemented a voluntary policy of zoning (industry out of the city core in favour of the service sector). The idea behind this policy was to make it harder for companies that could not be integrated in a housing environment, to locate in the city core. Those firms were encouraged to (re)locate in the peripheral regions in industrial zones and were rewarded for doing so. But politicians in the nineteen-sixties did not have an integrated location policy for the different kinds of economic activities. All these factors put together resulted in the growth of peripheral regions and this in turn accentuated even more the economic and social spatial division. The city centre de-industrialised, resulting in the creation of inner-city wastelands, in favour of the growing service sector. Several buildings were left empty and contributed to the general impoverishment of the city centre. This in turn was responsible for a number of social problems which could not be solved by some kind of social or housing policy only. Thus, it became clear that a general policy was needed that could tackle the core problems.

The fourth phase in the urbanization process, after urbanization, sub-urbanization and ex-urbanization, is the *urban re-integration* of people and economic activities. This phase is characterized by a renewal of the city centre, which entails an overall renovation of the city's patrimony, either by demolishing buildings or by constructing houses. This had gentrification as a social consequence.

Urban re-integration started around 1975 and rose to a high in 1980. Mostly small and medium-sized companies from the traditional sectors were involved. They favoured small business parks in the city centre and occasionally re-used the abandoned industrial sites (B. Mérenne-Schoumaker, 1983, p. 53-61).

The locational tendencies towards the city were caused by the uncertainty with respect to economic growth. Soon after the oil crisis in 1973 companies revalued the economic cost of energy and due to its sharp rise became more aware of the economic consequences: a rise in transport cost and construction cost. This in turn meant extra pressure on business because any location away from the city centre now resulted in additional energy costs.

Companies also became more involved in computer technology and realized the need for specialized information. As information spreads hierarchically over the different regions and as the abundance of information reflects the hierarchical status of the region, the information intensity in the city centre must be significantly higher than anywhere else (P. Lloyd and P. Dicken, 1977, p. 64). This made a location in the city core desirable. Today, however, information can be passed on more easily and cheaply through high-tech communication facilities. Only information of the highest level is communicated face-to-face. The city centre also offers the 'new industries' the advantage of the so-called 'neighbourhood effect'. This means that interpersonal communication increases when the distance that information must cover, decreases. The faster and the more accurate information gets to a company, the greater the

value of that information (T. Hägerstrand, 1967, p. 163). It goes without saying that this is only important to a small number of companies (not to firms concerned with production or distribution).

Politicians, too, have advocated urban re-integration. For a start, it was one way to put a stop to the economic downturn that most European cities experienced. In order to reassure the city's future local government had to take action. After all, inner-city industrial decay means a substantial loss of employment and tax revenue. As a way to improve the local economy, small ecological industrial firms involved in high technology, and artisan industry were given a locational preference. In the Netherlands, a public campaign was set up to encourage such firms to localize voluntarily in the city centre. Companies were given financial as well as fiscal aid. The new local policy also made it possible that buildings were sold or leased to companies that fulfilled the public requirements.

The negative influence of urban re-integration on the economic growth of peripheral regions still is not very clear. In Belgium the growth of the service sector in peripheral regions was very strong in the 1980s, even though urban re-integration also peaked in that period. The new economic activities resulting from urban re-integration contributed to the revival of the city core as an industrial centre.

Ex-urbanization and, to some extent, urban re-integration have become noticeable in a number of cities such as New York, Düsseldorf, and to a lesser degree, also Antwerp. However, the question remains what kind of economic activities play a role in the locational process. In the next section we will try to clarify this matter.

2 The economic activities in the ex-urbanization and the urban re-integration process

Traditionally, urban economic activities are divided into two sectors: the industrial sector, concerned with production of goods, and the service sector. The agricultural sector, being in general absent from the city centre, will not be considered here. The binary division into industry and services, however, seems more and more artificial because of the growing links between production and services. Some companies are involved in both production and services. Moreover, in locational analysis everything points to the inefficiency of this distinction. It is clear that the spatial requirements and transport needs of certain 'heavy services' such as wholesalers, transporters and garage-owners are getting more closer to the locational desires of traditional industries. Analogously, the so-called new industries' (high technology) need for face-to-face contacts and specialized information is comparable with the locational needs of certain services (B. Mérenne-Schoumaker, 1982).

On the basis of the locational behaviour of economic activities, as described above, B. Mérenne-Schoumaker (1990) makes a distinction between two large sectors: the traditional industry, the artisan industry (craftsmanship) and the heavy services on the one hand, and the service sector and the new industries on the other. Let us now look in more detail at the urban locational behaviour of these two sectors.

2.1 Traditional industry, artisan industry and heavy services in the urban region

Traditional industry, artisan industry and heavy services (wholesalers, transporters, garage-owners, hospitals etc.), have undergone a profound change in the urban region. Almost every West European country witnessed a far-reaching de-industrialization of the city centre and its immediate surroundings in favour of a growing peripheral region. Recent trends are less clear and homogeneous. Much can be learned, however, from the way the traditional industry, the artisan industry and the heavy services evolve in the ex-urbanization and urban re-integration process.

2.1.1 The period of ex-urbanization

The ex-urbanization of the heavy activities can be explained by a number of factors. Some of these are of a general nature (section 1). Others are more specific and can be defined as internal to the company or externally controlled.

The factors internal to the company which contributed to the ex-urbanization can be summarized as follows. The first factor is the inability of the real estate market to adapt to changes. Existing companies experience difficulties when expanding and new companies do not find the necessary space. In the city centre locational space is generally limited and consequently expensive. Companies seeking a location in the city centre are therefore usually confined in their choice to the existing buildings. As few buildings meet the average firm locational need, many companies are urged on to search a location outside the city centre (e.g. in the peripheral regions). Secondly, there are problems with accessibility and transport, both on the input (supply) as well as on the output side (sales or contact with clients). This situation is partially responsible for the exodus of heavy activities. A third factor concerns the growing functional disjunction between the economic and residential activities. This incompatibility puts a kind of social pressure on companies. Because residents will only tolerate a certain amount of traffic congestion in the city centre caused by heavy trucks, and will only bear a certain amount of air and noise pollution, companies have to take those externalities into account and must respond accordingly.

If we now turn to the factors external to the company, it becomes apparent that local and national government had an important role to play. Public policy towards ex-urbanization in favour of the 'light' service sector and the new industries has put its mark on the locational process. The so-called zoning policy played a very important role. Its aim was to avoid externalities and create space for economic growth. The pressure from the real estate business was also responsible for pushing certain companies out of the city centre. Because rental prices increased, some companies ran into financial difficulties and were forced to relocate. Low-priced value of land in the peripheral regions on the other hand acted as a pull factor. Still for some industries the city centre remains an attractive location.

2.1.2 The period of urban re-integration

The urban re-integration of the traditional industry, the artisan industry and the heavy services goes hand in hand with the creation of small urban business parks and, occasionally, results in the re-use of old abandoned industrial sites (cf waterfront developments).

A substantial drop in financial resources was one of the internal factors responsible for urban re-integration. Some companies became financially limited because of the rise in production costs. As a result, their spatial requirements diminished. Another factor which contributed to urban re-integration was the higher demand for quality labour. The well diversified labour market in the city centre turned out to be an important trump card for some businesses.

Urban re-integration does not mean that the city centre is freed from all its drawbacks. Companies that left the city during the ex-urbanization are not returning now. But small firms and newly established firms generally do not require a substantial amount of space. Therefore industries, such as harmless high-tech companies, are attracted by the city centre.

In the 1980s local government preferred a mixed policy to a zoning policy. Public measures were taken to preserve and re-assess the urban environment, and emphasis was placed on the image of the city. Also, the renovation of office buildings was stimulated and the re-use of wastelands encouraged (cf the old docklands).

Still, an important question remains unanswered: "Can the urban re-integration of the traditional industry, the artisan industry and heavy services put a stop to the growing de-industrialization of the cities ?" A voluntary policy towards industrial re-integration on its own cannot suffice. Only a small number of industrial companies are prepared to locate in inadequate buildings and the majority of industrial firms do require a substantial amount of space which the city centre cannot offer. Moreover, the city, as well as the people who still live in it and the industry all have to benefit. That is why politicians must find a compromise between company demands and desires and the demands and desires of the population, the non-profit sector and the public service.

The traditional industry, artisan industry and heavy services show a certain similarity in their locational behaviour. Table 1 reviews the locational characteristics of the above mentioned economic activities in the urban region. An attempt is made to compare the two principal tendencies.

2.2 The service sector and the new industries in the urban region

The economic importance of the service sector and the new industries has increased significantly. Factors responsible are the growth in demand for public goods, the expanding non-profit sector with the increase of welfare services (culture, education and health), the growing importance of being well-informed in our society and the advances in technological innovation. The general improvement of the standard of living has also resulted in people buying more household appliances. Another important factor relates to the increasing number of companies which provide services to other companies. This so-called *externalization* of services could result in the physical (spatial) separation of production and service activities. Moreover, it had led to the establishment of industrial firms that only have a service function.

We can distinguish four types of services. First, there are those services that are meanly directed towards companies and the non-profit sector. These include the services rendered by banks, insurance agencies, real estate brokers, consultancy agents, accounting bureaus, lawyers, etc. Their principal economic function is to satisfy the companies' demand for information and specialized skills. In order to provide that specialized information and skill the service company should be in touch

Table 1
Locational process in the urban region. An attempt to compare the two principal tendencies

	Ex-urbanization	Urban re-integration
Time period	1960 until 1975 slackening since 1975	From 1975 and especially in 1980
Economic context	Growth	Stagnation
Nature of the process	1) Location of new firms in the periphery 2) Firms located in the city moved/expanded to the periphery	1) Establishment of new firms in the urban region 2) Already existing firms moved/expanded to the city centre
Importance of the process	Dominant	Marginal
Areas involved in the process	Peripheral zones or land near motorways and traffic junctions	1) Small urban zones 2) Old industrial sites which are re-used
Firms involved in the process	All, but according to function and sectoral growth	1) Local small and medium sized companies from the traditional sectors 2) Companies from the new industrial sectors or new form of urban economy
Causes of the trend		
- General context	1) Reduction in transport cost and greater relocation facilities 2) Profound changes in production and the commercialization and organization of the employment 3) Internationalization of the economy	1) Growing economic uncertainty 2) Rise in energy and construction cost 3) Development of the informatization of firms
- Internal factors to the company	1) Real estate market's inadaptability 2) Accessibility and transport difficulties 3) Difficulties with the neighbourhood 4) Growing functional disjunction	1) Drop in financial means 2) Spatial requirements are frequently smaller 3) Higher demand for quality labour
- External factors to the company	1) Policy of zoning 2) Pressure from the real estate market 3) Public measures in favour of ex-urbanisation	1) Mixed policy 2) Public measures for the preservation or return of the urban environment
Supporters of the voluntary policy	At all levels, major contribution of local and regional government	At all levels, major contribution of local government
Aim of the voluntary policy	1) To stimulate the growth of business 2) To establish the urban region and to reserve space in the city centre for the service sector	1) To stop the industrial decline 2) To reassure the city's future and to further develop the service sector (which in turn depends on the renewed industrial sector)
'Target' of the voluntary policy	The major international and national industrial enterprises	1) Small industrial high technology enterprises 2) Artisan industry (craftsmanship)
Who got forgotten ?	1) Small enterprises 2) Artisan industry 3) 'Heavy' service sector	1) Major enterprises 2) 'Heavy' service sector
Policy measures	1) Publicity and reception 2) Financial and fiscal aid 3) Policy of zoning	1) Publicity and reception 2) Financial and fiscal aid 3) New policy of urbanisation 4) Rent and/or sale of buildings
Spatial consequences	1) Growth of the peripheral region and sharpening of the economic and social spatial division 2) Urban de-industrialization in favour of the service sector in the city centre 3) Renovation of certain districts 4) More waste lands	1) Slackening in the occupation of major peripheral regions 2) The reuse -not always in an appropriate way- of the waste lands 3) New economic activity in the city centre

Source: B. Mérenne-Schoumaker (1983).

with the market, know the new preferences, the on-going innovation, etc. The externalization of services makes companies even more dependent on contacts and relations with the service-providing firm. This is one factor which contributes to agglomeration. A location in a (major) city centre is therefore desirable. London's 'City' is one of the many examples where there is such a high concentration of the service industry.

Companies which are located in the city centre experience what H.W. von Borries (1969) calls 'Fühlungsvorteile': the advantages of being informed better and faster because of a central location. It goes without saying that, ideally, companies which provide services should be located in the immediate neighbourhood of those companies which receive that service. As this is rarely the case a location in the city centre is a well-balanced compromise.

The second type of services concerns the distribution services (wholesalers, retailers, transport and communication). This kind of services is aimed at both companies and consumers. Its principal economic function is the distribution of goods and information. Goods are generally distributed through retailers, who are usually located in the city centre, in the periphery or at busy traffic junctions. Retailers show a tendency towards concentration. The distribution of shops is spatially limited. This can partially be explained by the consumer's multi-purpose-shopping behaviour. Information gets distributed through the usual communication channels. These include mail, telefax, telex, data-lines and direct communication.

Social services such as medical services, hospitals, education and public administration are a third type of services. Like the distribution services the social services are also aimed at both companies and consumers. Their main function is to improve the general standard of living and to control the socio-economic system. Although there is a certain amount of concentration of these services in the city centre, they are also widely dispersed over the peripheral regions (the sub-urbanization of people also resulted in the sub-urbanization of the social services).

Finally, there are individual services such as domestic services, restaurants, hotels, repair services, laundry, barbers, beauty parlours and other services in the field of leisure and culture. Most of the individual services are well-distributed in space according to the city's population. The catering and hotel business as well as the leisure and cultural activities, however, are generally located in the city core. Table 2 summarizes the four different types of services with their associated locational tendencies.

In its locational behaviour the service sector is characterized by the *spatial concentration* of its activities a the growing locational *specialization.* Which kind of costs can be associated with this locational pattern ?

Table 2
Characterization of the service sector and locational tendencies

Type of service	Principal economic functions	Aimed at	Locational tendencies in the city
Services provided to companies Bank, insurance, real estate, consulting, lawyers, accountants	Satisfy the demand for information of enterprises Creation, management, storage and treatment of information To stimulate the innovation	Companies	Concentration in the major cities and in specialized regions
Distributional services Transport and storage, mailing, communication, retailing (except restaurants)	Satisfy the demand for transport and communication Distribution of goods and information Express the activities of the production and consumption	Companies and Consumers	<u>Transport</u>: Important concentration in the specialized regions, near the city centre and the periphery <u>Retail</u>: Three major areas; city centre, its surroundings and traffic junctions; limited distribution
Social services Medical service, education, public administration	Satisfy the social demand Improve the general standard of living Control of the socio-economic system	Companies and Consumers	Certain amount of concentration in the city centre but also a distribution to the periphery of the city
Individual services Domestic services, restaurant, hotel, repair service, laundry, barber, beauty parlour, leisure and culture	Satisfy the individual demand Improve the individual standard of living Reproduce the social and individual status	Consumers	Strong distribution (according to the city's population) with the exception of the catering and hotel business, the leisure and cultural activities

Source: A. Cunha (1988) and for the locational tendencies: B. Mérenne-Schoumaker (1990).

Services, in contrast to goods, need to be 'consumed' where they are supplied (L.H. Klaassen, 1972, p. 28). The fact that services are intangible, makes them non-mobile and non-storable. As a result, clients generally participate in the production process of a service and are in direct contact (physically or through the media) with the firm or agency that provides the service. As a consequence, a service will primarily be bought if the meeting place where the service is offered is to the satisfaction of the client. The meeting place is therefore crucial in the buying process, unless the client has an absolute need for the service.

We can distinguish two possible meeting places: either the client travels to the firm which provides the service, in which case the firm's location acts as a meeting place, or the firm meets the client in his or her own environment. If the client travels to the firm which offers the service, then the choice of location of the firm is crucial. The location must be well accessible and correspond to the client's perception of the service offered. The location must therefore suit the image that the firm wants to express. For the consumer the meeting place acts as a kind of setting which exudes the overall quality of the service. The overall locational cost is reflected in the value of land which is proportional to the degree of accessibility and the quality of the location.

However, when the firm meets the client in his or her own environment, the locational cost consists of the cost of communication and transport, in general the cost of access to the market. Yet there are still other costs which must be taken into consideration. Certain types of services, such as those provided by lawyers and consultants need highly qualified people. When the local labour market cannot fulfil these requirements, problems may arise. Moreover the service industry itself also consumes a great deal of services. As a consequence, the costs of access to the intermediate service market also need to be calculated in the locational cost.

With the exception of the price of land, all other restricted costs (access to the final service market, the labour market and the intermediate service market) can be reduced by choosing a location in a major city or in a business district.

The growth of the service sector can also be brought into relation with the increasing number of office buildings in the city centre. Although little research has been conducted on the location of firms in office buildings, it seems that traditional advantages such as accessibility, proximity, prestige and tradition have remained highly appreciated. In its extreme form, an office building could be a skyscraper.

Skyscrapers usually indicate the extreme costliness of the land. Going higher up is one way to make office space more reasonably priced. Moreover, skyscrapers offer two additional advantages in terms of spatial concentration. On the one hand, they facilitate fast communication which in turn enhances efficient management while on the other hand transport costs can be reduced substantially (J. Goddard, 1975, p. 11-14 and P. Daniels, 1975, p. 19-23).

Since the 1970s and especially the 1980s the spatial concentration of the service sector has been partially enfeebled by the impact of computer technology increasing the standardization of certain services. At the same time, however, the introduction of information technology allowed companies to concentrate on a further development of existing markets and on the exploration of new markets. The computer also reduced personal contact, which is so typical for the service sector. As a result, clients began to revalue the cost of transport. They minimized the cost of communication because the transfer of information was made easier. However, the spatial de-concentration of the service sector was limited, because major companies and the public administration, which are usually located in the city centre, still remained predominant in the general demand for services.

The service sector is also characterized by increasing specialization in its locational behaviour. More and more retailers in the city centre concentrate on the sale of specific articles. The clothing business is a good illustration of the phenomenon. Clothes, hats, shoes, ties, scarfs, gloves, etc. can usually be purchased in separate stores. These specialized stores are mostly located in the city centre, and less frequently in the peripheral regions or near busy traffic junctions. Wholesalers, on the other hand, prefer the latter location. The specialization is also noticeable in e.g. the medical service and public service sectors. What causes the specialization of the service sector in the city centre ? B. Mérenne-Schoumaker (1990, p. 7) advances several reasons: consumer behaviour (customers like to compare different stores which sell the same articles), the existence of mansions (which act as an ideal location for lawyers, doctors, architects, etc. in the city centre), the price of land, the policies of functional segregation, the rhythm of life ("time is money") and subjective image of a location in the city centre.

Economic activities differ in their locational behaviour with regard to the city centre. This means that a central location is advantageous to some companies and disadvantageous to others. In the next section a number of criteria are used to make an evaluation of the city centre as a possible location for a company. The criteria include the scale of the company, the city's transport problems, the local labour market, the industrial inertia and the institutions.

3 A location in the city centre: what does it entail ?

The way in which the advantages of a central location outweigh the disadvantages has an influence on the entrepreneur's decision to (re)locate the company in the city centre. We shall now discuss, via a number of criteria, what a location in the city centre entails, and attempt at making an evaluation.

3.1 Scale of the company

The scale of the company affects the production cost and the profit margin. There are two ways in which an individual firm may organize production in such a manner that an increased scale is achieved. The firm may either endeavour to raise its output with the existing plant, organization and techniques until the point of lowest unit cost is reached; or it may change its plant, organization, techniques and even its location in order to achieve the same effect. The latter alternative leads to the concentration of production in a few large plants or firms. The result may be that industries become increasingly 'localised' and the distribution of plants much more 'sporadic' (P. Toyne, 1974, p. 56). The extent to which scale economies may be achieved within a particular company depends on the extent to which efficiency in production can be increased or maintained. Several ways are possible, for instance through the division of labour (subdivide the production process and let people specialize in different jobs), the capital-labour substitution or by sub-contracting specific parts of the production process to external specialized firms.

Just as a single firm can achieve internal economies as it expands its output and increases its efficiency, so a whole industry or several different industries may be able to achieve external economies by means of spatial agglomeration. This type of economies is not only related to the physical size of the agglomeration but also to other advantages of convenience resulting from competition between firms in a spatial setting (P. Toyne, 1974, p. 62).

It is possible to distinguish between two different kinds of agglomeration advantages: localization economies and urbanization economies. On the one hand, it is remarkable that competing and rival firms frequently tend to locate in close geographical proximity to each other (cf. Hotelling's analysis of a duopolistic market). Contrary to what one may expect, the increased competition will not lead to a decline in sales and profit of each individual firm. The initial settlement of a firm, however, depends on the accessibility of the location. Once a firm has settled, it attracts other companies. As a result, potential clients will prefer the location where supply is concentrated to the individually localized firm. However, these so-called *localization economies* do not accumulate infinitely. They may turn into diseconomies at certain critical size levels and may lead to the decentralization of economic activity. When congestion becomes inevitable and labour costs are rising, marginal returns begin to diminish. As a result, new companies are no longer eager to locate in the already saturated area and existing firms may consider relocation.

But not only competing and rival firms tend to locate in each other's neighbourhood. Other activities will be attracted by the prospect of being in close proximity to the first settled industries. This is usually referred to as the so-called *urbanization economies.* A number of economic activities arise to serve the needs of both industry and population. Banks, insurance, repair and maintenance facilities all move in because they wish to secure as large a part of the market as possible. But after a certain period of time the urbanization economies also reach their saturation point. Companies which feel the need to expand even further are then limited by the available amount of suitable land.

J. Vernon Henderson (1988) has done some research on the influence of external economies of scale on the locational behaviour of firms. In his study he estimated the nature and size of external economies of scale in different industries in the United States, Brazil and Japan. Vernon found that the localization economies are mainly responsible for the external economies of scale in the industry. Local industrial employment is therefore more important than the overall size of the urban region. Cities which have the tendency to concentrate industrial activities such as the chemical and metallurgical industry generate important locational advantages. Vernon also computed an elasticity of locational advantage which is believed to be descending. This means that when the scale of the company increases the locational advantages become less apparent.

3.2 Transport and mobility

In an economic system with locations geographically separated by distance, the transfer of goods, materials and individuals is an inevitable necessity of spatial organization, since both consumers and producers are located at different points in space. This transfer is not without costs. The total transport cost results from *direct charges* that are levied by transport carriers and *indirect costs* which characterize different transport modes.

The total direct cost consists of fixed costs (terminal costs) and variable costs of transport (sometimes known as line-haul costs) and tends to increase at a relatively declining rate. This means that the transfer rate per unit for hauls over short distances is higher than for long-haul transfers (tapering rate). The direct cost is also related to the physical characteristics of the commodity which needs to be transported and to the transport mode. In addition to the direct cost, indirect costs such as costs of transit time, safety and reliability, accessibility, flexibility and adequacy also need to be taken into account (P. Toyne, 1974, p. 161-172).

It goes without saying that the overall transport cost heavily depends on the locational choice. A location in the city centre, with its compact structure, can in some cases minimize the company's need for transport. It can limit the actual movement of goods and individuals and stimulate the flow of information. With regard to the latter the city centre offers an overall information advantage (cf the 'Fühlungsvorteile').

There is an important relationship between the principles of movement minimization and the derivation of scale economies through spatial agglomeration. On the one hand, the producer needs to have easy access to the market in order to maximize sales and to operate with increasing scale. On the other hand, the consumer, aware of travel costs increasing with distance, wants to be as close as possible to the producer if he is to minimize his travel costs. Therefore both producer and consumer are able to minimize their movements by locating in each other's proximity. However, as the residential and industrial agglomeration becomes more apparent the relative accessibility of the central area decreases and will finally result in congestion (P. Toyne, 1974, p. 182).

The congestion of the city centre has become a major urban issue. Politicians may be criticized for not reacting adequately to the congestion problem, but who could have imagined that traffic congestion would take such proportions ? Moreover, it is not only the increase in traffic jams which causes anxiety but also the magnitude of the environmental consequences (traffic noise, vibrations and atmospheric pollution). In many cases local governments have tried to solve or at least alleviate the urban transport problem using conventional methods such as parking prohibition, speed ramps, traffic signs, traffic circulation plans and the construction of residential areas designed to slow down traffic. However, the overall effect on the decline of congestion was mostly negligible. That is why alternative solutions to the congestion problem have been put forward. Without being exhaustive they can be summarized as follows:

(i) Car driving could be made more expensive by levying a surplus tax on petrol. This measure, however, entails supranational co-ordination and does not take into account specific circumstances such as time, place, intensity and nature of the externalities caused. Road pricing, on the other hand, does not have those specific disadvantages but the immediate implication of the system is still subject to debate (see K. Button, 1982, p. 172-174).

(ii) The existing roads could be enlarged and/or new roads could be built in order to increase the capacity of urban transport infrastructure. This solution has its drawbacks. The construction of road infrastructure is very expensive and the resistance from ecological pressure groups is substantial. Also, one can question whether an increase in road capacity in itself will not generate more urban traffic. Politicians have to realize, moveover, that putting public money in the construction of additional roads will imply that less public money can be spent on other projects such as investments in public transport. Furthermore, most cities already have an extensive road system.

(iii) Investment in public transport could alleviate road congestion. The capacity of the existing public transport system should therefore be expanded and the quality of service improved. A possible switch in transport modes, from private to public transport, could be a result. However, a number of people will always prefer private to public transport, whatever the improvements of the public transport system may be.

(iv) The functional disjunction between economic and residential activities in the city is partially responsible for the increase in traffic flows. A growing number of people are working in the city centre while living in the urban periphery. Traffic flows could be reduced if the city centre is made more attractive so that the sub- and ex-urbanization of people is stopped (D. Yzewyn, 1990, p. 107-111). Local governments have to tackle problems like crime, prostitution, the deterioration of housing and vandalism in order to encourage people to settle in the city centre.

(v) New transport initiatives try to diminish the congestion problem in the city centre. What might be expected from a licensing system for rush hour traffic or for entering a central zone ? It might initially reduce the total amount of vehicles and increase traffic speed. Certain measures of ring route designations could ban heavy traffic out of the city centre. Also, park-and-ride facilities (construction of large parking places outside the city centre near public transport facilities) could be increased and car-pooling stimulated (K. Button, 1982, p. 174-176).

Related to the road congestion issue is the problem of parking in the city centre. Car-owners tend to say that parking areas in the city centre are scarce, while city dwellers sometimes find them visual nuisances. Parking areas in the city centre occupy a substantial amount of space which could be used for other activities. Studies have indicated that a car entering the city centre will only be moving for 5 per cent of its time and is consequently parked for 95 per cent of its time (J.F. Berthe and C. de Chabot, 1983). Here too, local governments have taken some action to try to solve the parking space problem. This included the construction of more underground parking facilities and the revaluation of parking fees and time in order to minimize traffic congestion. Local authorities have given weight to the implications for local firms when designing traffic management schemes which are to improve the access for central traffic, ensure efficient loading and also provide adequate and convenient parking facilities. The purpose is to keep needless traffic out of the city centre, but to ensure a degree of accessibility for essential traffic. The question still remains whether any of these actions will lead to the solution of the parking problem. If local government simply reduces the total number of cars entering the city centre, the parking issue becomes less of a problem.

It must be stressed that the proposed measures for reducing the inner city traffic congestion and solving the parking problem are alternatives, and that single actions will only result in temporary or local improvements. There is a danger that conflicting effects will occur, so that an integrated set of measures is to be preferred.

3.3 Local labour market

Labour requirements will vary considerably between firms, industries and locations. The labour requirements of a large firm differ from those of a small firm in the same business, not only in terms of the total number of workers needed, but also in terms of labour types and skills. This has largely to do with the way in which bigger firms are able to derive scale economies through the introduction of specialization and division of labour. Certain industries need highly qualified labour, while for others this is not the case.

These distinctive labour requirements of particular firms and industries make some places more suitable locations than others. For instance, a firm which needs a large labour force with a wide range of skills will find this easier to obtain in major metropolitan areas than in smaller towns.

The company's locational choice is based on the optimization of the relationship between its labour requirements and the supply of labour at different locations, which in turn is primarily related to the cost, the productivity and the mobility of labour.

The cost of labour is measured in terms of wage rates and is reflected in the price of the product. Low wages make it possible that a product is marketed at a competitive price. The wage rates that are paid depend on the conditions of the labour market that characterize different sectors of the economy at different locations and at different times. In general, wage rates are normally higher in the large towns and city centres because of the increased competition existing between firms and industries for the limited supply of labour available at those locations. However, high rates may also be offered in remote areas in order to try and attract labour to them (P. Toyne, 1974, p. 129-131).

Will companies systematically tend to locate in areas where wage rates are low ? In other words, can a locational theory based on wage differentials be justified?

According to E.M. Hoover (1948, p. 103) locations with high wage rates do not necessarily attract job seekers or repel employers. The employer is essentially interested in low processing costs, which depend on labour productivity and also on the local labour supply. The best labour supply from the employer's standpoint is often found in places with relatively high wage rates. The crucial factor is not so much what a businessman has to pay for labour but rather the return he gets for a given payment.

Labour productivity depends upon many factors. The machinery given to the labour force and the managerial skills which direct the labour activities are critical for efficient production. But there are still other factors which play an important role. Labour attitudes and labour relations tend to come to the fore in discussions of the role of labour as a factor in the locational choice. "Not that wage rates are not important as a consideration; they are. But to the everyday operation of a business enterprise, differentials in strike proneness or absenteeism tend to weigh more heavily these days on a decision maker's mind than a few cents an hour differential in cash labour outlays" (P. Lloyd and P. Dicken, 1977, p. 219). The absence of union militancy in a local labour force may also indirectly contribute to productivity.

In the past workers were not able to travel far each day to go to work. The choice of location was then found to be more important since the labour supply could only be drawn from a limited area. At that time the city centre had an abundant labour reserve. Today the labour force is more scattered in the locational space and has increasingly become mobile. This contributed to the reduction of wage rates differentials.

The concentration and availability of unskilled and skilled labour is an important advantage of the city centre (K. Chapman and D. Walker, 1987, p. 49). The introduction of machinery, the substitution of capital for labour and advanced technology have severely reduced the need for unskilled labour. The presence of workers with special technical skills now gives to some areas a locational advantage.

Not only technical skills but also business skills are important. This brings us to the discussion of the quality of management.

The quality of management is sometimes left out of the labour market evaluation process. D.M. Smith (1981, p. 53) treats management as a sub-category of labour and argues that the quality with which an organization is directed is of vital importance to the success or failure of that company. The city centre offers the advantage of having a well-equipped educational system (business schools and universities) and a large cultural patrimony (e.g. museums and opera).

The overall influence of the labour factor on the locational process is difficult to evaluate. Increasing mechanization, automatization and the tendency to substitute capital for labour may well reduce the importance of labour in the location process. But significant local advantages with respect to cost, quantity and quality still exist. The existence of a diversified labour market remains appreciated by companies. After all, spatial labour force mobility has its limits (cf the socially unjustifiable commuting).

3.4 Industrial inertia

Small companies are often dependent upon local banks, where close, often personal contacts exist between the businessman and the financier, either for the financing of investment projects or for more common transactions. Major enterprises and multinational corporations usually do not encounter any difficulties in obtaining investment capital. Their activities are either financed internally through the use of capital reserves or externally through shares or loans.

The spatial mobility of capital differs according to the specific form of the capital involved. Physical capital like buildings, machinery, etc. is by definition largely immobile once it is put in place. The new capital units are more mobile than the already established capital stock but once they are themselves put in place they become functionally immobile. This phenomenon is often referred to as *industrial inertia*. "Industrial inertia is the tendency for an industry to remain in operation at a location when the reasons which brought it there in the first place have either lost their significance or completely disappeared." (P. Lloyd and P. Dicken, 1977, p. 227).

So capital is far less mobile than is often suggested by neo-classical economic theory. Empirical research by H.W. von Borries, A. Kuklinski and R.C. Estall has shown that up to 80 percent of all new manufacturing investment in advanced nations is meant for the expansion of existing plants. Therefore only a limited proportion of the total capital stock is available for the financing of development elsewhere. This results in the growing accumulation of capital in those areas which are already very capital intensive.

In some cases this capital inertia gives a false sense of security to businessmen. The idea that the dominant companies of today will still remain the important ones of tomorrow, leads to a general lack in business dynamism. This passive attitude proves sometimes fatal, the more so since major disinvestments are often concentrated in those areas where traditional investments were made.

The immobility of capital is but one of the factors responsible for industrial inertia. Companies often only remain located in a particular place just to stay in touch with their business relations.

3.5 Institutions and facilities

J.G. Lambooy (1980, p. 121-122) considers the presence of institutions to be an important agglomeration advantage. He points to the fact that in the city centre economic and political power is more concentrated than anywhere else. In most European countries the city centre houses parliament, the city hall, union buildings, the stock exchange, the national bank, the local government offices, the courts, etc. The city centre with its cultural patrimony also hosts a number of recreational facilities (service clubs, sporting centres, restaurants,...) which can offer businessmen an information advantage. Recreational clubs can be seen as possible meeting places for managers who have informal business contacts at a high level.

3.6 Conclusions

The city centre offers a wide range of possibilities for the location of firms from the different economic sectors. Some factors are to the advantage of the traditional industry and others to the service sector. In both cases the company's top management is encouraged to evaluate the advantages and disadvantages associated with a central location. Scale economies through localization and urbanization advantages can more easily be realized in the city centre. The compactness of the city centre and the presence of institutions are responsible for an information advantage. Furthermore, the city core has a diversified labour market and accumulates investment capital. But a location in the city centre also has its problems. The traffic and parking difficulties are one of the most severe problems with which most European cities have to cope nowadays. The labour force does not come in cheap either, although this is compensated by a higher labour productivity. And finally there are some problems which have not been touched: the value of land in the city centre, the social and psychological consequences, the question of housing, the concentration of consumers, etc.

4 General conclusions

The duality in locational preferences of firms is partially responsible for the revival of the city centre. Cities have undergone a substantial transformation due to economic, technological and social changes. As a result, firms from different sectors of the economy and different dimensions reckoned it to be optimal to change their location. The city core and its peripheral regions became geographically more defined because of this.

The locational attitude of firms towards the city centre has gradually altered. Entrepreneurs have carefully examined all repulsive urban forces and balanced them with the attractive forces, the result of which has indicated whether a central location is or is not to the benefit of the company. Certain factors play to the advantage of the city centre. These include an information advantage, a specialized labour market and the presence of capital and institutions. However, traffic congestion and parking difficulties and the restricted amount and high value of land all contribute to the weakening of the attraction of a city location.

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