Grzegorz MICEK

THE CHANGING GEOGRAPHY OF BUSINESS AND PRODUCER SERVICES AT THE INTRAURBAN SCALE: THE CASE OF CRACOW (KRAKÓW)

Abstract: The author discusses the spatial differentiation of business and producer services in Cracow. The situation in the capital of Lesser Poland (Małopolska) is compared with Warsaw and large Western European cities. There is a visible dispersal of some activities towards the transitional zone (auditing activities provided by the Big Four establishments) and further peripheries (computer and R&D services). Nevertheless the old, medieval town is the core for many activities such as legal services. The Cracow’s multinucleated business and producer services spatial pattern shown in the research stems both from the 1960–1980s service sites and several concentrations at recent office developments.

Keywords: business and producer services, spatial dispersal, clusters, multinucleated (multipolar) model.

1. INTRODUCTION

The main aim of this article is to analyse and evaluate spatial differentiation of producer and business services in Cracow by focusing on spatial processes and locational behaviour of enterprises. Location patterns between the capital of Małopolska and the Western European cities are also compared. Furthermore, it is considered to what extent the deconcentration of business establishments takes place in Cracow.

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The pioneer analyses of spatial patterns of business and producer services (BPS) in the big cities were conducted in 1960s (Morgan, 1961; Davies, 1965). The growing role of BPS in a region's growth was expressed by many authors in different countries in last the forty years. Research was conducted in metropolitan regions (e.g. Howells, 1988) and on the intraregional scale (e.g. Hessels, 1992, 1994; Illeris, 1990). The economic role of the sector (Cuadrado et al., 1989), location of business and producer services (Harrington, 1995), the role of milieu in attracting business and producer services (Maillat and Perrin, 1992) were analysed. The RESER (European Network on Services and Space) has become the core of research into business and producer services (‘Business Services...’, 1994), mostly in Western European countries.

In Cracow there were comprehensive research studies on land use and service location in the old town (Górka, 1986, 1994). Recently Wilk (2001) carried out similar investigations into various consumer and producer services in Warsaw. The scope of the research is similar to that of business and office developments analyses (Hessels, 1994; Louw, 2000; Benett, Graham and Bratton, 1999; Micek, 2003), as the majority of BPS are office activities.

It is a common distinction between producer services, which serve directly production processes (e.g. transport and banking services), and business services (marketing, legal services, financial consulting) used for organisation of sales. However, as Werwicki (1998) shows, it is far from final decision what are the producer services and business ones. Both terms are quite often used simultaneously and interchangeably (Hitchens, O'Farrell and Conway, 1996; Benett, Graham and Bratton, 1999). The following analysis concerns both business and producer services (BPS), hence this general term is applied.

Cracow with its 750,000 inhabitants is often perceived as a bipolar city with a historical core (Old Town) and socialist district of Nowa Huta developed next to large metallurgical works. Since 1990 the analysed services were concentrated almost exclusively in the Old Town and its fringe. Nowa Huta, located about 8 km to the west of the Old Town, suffered from a lack of BPS (e.g. underdevelopment of the banking system may be shown by only five banks existing in this district in 1995).

Twenty two classes and subclasses of NACE representing BPS services were included in the analysis. The author decided to use very narrow activities in order to analyse the services which are offered for enterprises. Therefore wider activities (e.g. insurance sector which is difficult to divide) were not the object of consideration. Furthermore, the narrow activities were grouped into broader 7 categories (table 1), which reflect Polish (Branowski, 1999) and foreign (Pilot Survey..., 1992; Illeris, 1994) classifications of service sector.
Table 1. Analysed activities

<table>
<thead>
<tr>
<th>Broader categories</th>
<th>NACE</th>
<th>Class/subclass</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Operational services</td>
<td>64.12</td>
<td>Courier activities other than national post</td>
</tr>
<tr>
<td></td>
<td></td>
<td>activities</td>
</tr>
<tr>
<td></td>
<td>74.6</td>
<td>Investigation and security activities</td>
</tr>
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<td></td>
<td>74.7</td>
<td>Industrial cleaning</td>
</tr>
<tr>
<td>II. Financial services</td>
<td>65.12</td>
<td>Other monetary intermediation (commercial banks)</td>
</tr>
<tr>
<td></td>
<td>67.12</td>
<td>Security broking and fund management</td>
</tr>
<tr>
<td>III. Letting, renting and</td>
<td>70.21</td>
<td>Letting of own or leased property</td>
</tr>
<tr>
<td>leasing</td>
<td>71.2</td>
<td>Renting of other transport equipment (except cars)</td>
</tr>
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<td></td>
<td>71.3</td>
<td>Renting of other machinery and equipment</td>
</tr>
<tr>
<td>IV. Computer services,</td>
<td>72.1</td>
<td>Hardware consultancy</td>
</tr>
<tr>
<td>data processing and data</td>
<td>72.3</td>
<td>Data processing</td>
</tr>
<tr>
<td>base activities</td>
<td>72.4</td>
<td>Data base activities</td>
</tr>
<tr>
<td></td>
<td>72.6</td>
<td>Other computer related activities</td>
</tr>
<tr>
<td>V. Engineering services,</td>
<td>73.1</td>
<td>Research and experimental development on</td>
</tr>
<tr>
<td>R&amp;D activities</td>
<td></td>
<td>natural sciences and engineering</td>
</tr>
<tr>
<td></td>
<td>74.24.1</td>
<td>Engineering activities, industrial technological</td>
</tr>
<tr>
<td></td>
<td></td>
<td>projects</td>
</tr>
<tr>
<td>VI. Legal services and</td>
<td>74.12.1</td>
<td>Bookkeeping</td>
</tr>
<tr>
<td>bookkeeping</td>
<td>74.11.3</td>
<td>General legal activities and legal consulting</td>
</tr>
<tr>
<td></td>
<td>74.12.2</td>
<td>Accounting</td>
</tr>
<tr>
<td></td>
<td>74.12.3</td>
<td>Auditing activities</td>
</tr>
<tr>
<td></td>
<td>74.13.2</td>
<td>Market research</td>
</tr>
<tr>
<td></td>
<td>74.14</td>
<td>Business and management consultancy activities</td>
</tr>
<tr>
<td></td>
<td>74.52</td>
<td>Labour recruitment and provision of personnel</td>
</tr>
<tr>
<td>VII. Professional business</td>
<td>80.42.4</td>
<td>Adult and other education (professional</td>
</tr>
<tr>
<td>services</td>
<td></td>
<td>trainings)</td>
</tr>
</tbody>
</table>

Note: The activities which were analysed dynamically are in italics. The NACE abbreviation stands for the statistical classification of economic activities in the European Community (Nomenclature des Activités Économiques dans les Communautés Européennes).
2. ANALYSED DATA

The data about companies (the address and employment level) had to be obtained from company databases. The author decided to use the Internet databases. The Polish Teleadreson offers relevant address data of about 20% of analysed Cracow’s enterprises. There are included companies which are the most important on the market. Therefore 87% of the data was acquired from this database. The auxiliary sources of information (13% of records) were as follows: Spider.pl., freeware version of Hoppenstedt Bonnier, Yellow Pages, Polish Telephone Books and 17 various rankings from Rzeczpospolita, Nowe Życie Gospodarcze, Home and Market and Businessman Magazine. In the case of computer enterprises a valuable source of data was the Polish IT report (2001). The author managed to collect employment data for about 35% of 1,542 establishments gathered in the database. Therefore the author decided not to analyse the spatial pattern of employment centres (Harrington and Campbell, 1997). The dynamic analysis for the 1995–2002 period was conducted for four selected activities (figure 1) on the basis of data acquired from Yellow Pages and Polish Telephone Books. Additionally press news were also of some support.

The weight that reflected the importance of each establishment in the local and regional service sector was estimated in the database. The 7-stage algorithm was implemented (Micek, 2002). The main criteria of assigning weights were as follows: employment level, the position of the company on rankings of biggest companies in a particular sector, the position of the establishment in internal company’s hierarchy (headquarters, branch, subsidiary, etc.). Subjective, additional features, such as the importance of the analysed type of service in the whole range of activities and the innovative character of the activity were also used in a few cases. As a result, the highest weight (w = 3) was applied to 126 establishments, the lowest (w = 1) to 68% entities.

The typology of spatial-functional zones (Zborowski, 2000) was implemented in the article. Zborowski’s division criteria (both qualitative and quantitative) were as follows: the functions of the area, character and the density of housing, land use form, population density and demographic dynamics. In this classification Cracow was divided into the following seven zones: the central zone I represented by the Old Town, the central zone II (covering the areas between the first and second ring, Kazimierz and Old Podgórze), the transitional zone, the housing estates zone (consisting mainly of high-rise buildings),
suburban zone and rural-urban fringe\(^1\) (figure 1). In this article the city centre stands for the two first zones.

Fig. 1. Spatial-functional zones in Cracow: I – the central zone, II – the central zone II, III – the transitional zone, IV – the housing estates zone, V – the suburban zone, VI – the rural-urban fringe


Source: Author’s elaboration after Zborowski (2000)

3. THE DISPERAL OF SERVICES IN CRACOW

The general trend is the increasing dispersal of analysed establishments within the large cities (Harrington, 1995). This tendency is strongly limited to city boundaries in Poland. As it was noticed by Wilk (2001), there are few signs of deterring or even reverting dispersal (especially in the case of consulting companies).

Business and producer services concentrate not only in the Old Town. The dispersal of establishments towards the fringe of the Old Town is observed to

\(^1\) There were no BPS establishments recorded in this small zone of the city.
a large extent. It is not only the result of new or adapted offices, but also, to a lesser extent, of several, spectacular relocations of establishments. Spatial clusters were observed in Lubicz, Kościuszki and Lea Streets. The offices and adapted warehouses from the communist-era located in the area between the city centre and Nowa Huta district (e.g. Grzegórzki) also play an important role in attracting computer, leasing and security services. The newest investment in suburban locations should be outlined as well. There is a tendency towards the location of new office developments along the main roads leading to the other large cities.

Western suburbs are attractive to service activities (mainly IT – e.g. Prokom, Motorola) along with the control functions in industry (British Petroleum, CanPack). The following examples can be mentioned: The Office Centre Euromarket at the Ofiar Katynia Roundabout, Galileo building at the Globe Trade Center in Armii Krajowej Street and Cracow Business Park at Rząska. The latter office park is the confirmation of the popular claims expressed in Western Europe (Louw, 2000) and recently in Poland (Zychowicz, 2001) that areas outside city boundaries may pull investments in office space.

The deglomeration of back offices, which is typical of large cities (Hessels, 1992; 1994), was not recorded in Cracow neither in bookkeeping nor in accounting. The city centre attracts legal services, mainly lawyers’ and notary’s offices similarly as in Western Europe and Warsaw (Wilk, 2001).

Industrial and wholesale areas located in the suburbs pull the basic activities (such as security and cleaning). There is a visible concentration of professional business services in the Old Town (in CBD in some Western European cities). The Gini concentration coefficient for spatial-functional zones is the highest among other groups of activities reaching 0.68 (figure 2). However, it is mainly the result of a very low representation of theses activities in the suburban zone and rural-urban fringe and relatively large concentration in the central zone I and transitional zone (figure 3).

There is a growing role of peripherals, suburbs and rural-urban fringes, in housing the computer (figure 4) and R&D activities (Compact Disc Novelty data centre, Motorola, Delphi units). It can be shown by the relatively low concentration coefficient between 0.45 and 0.51.
Fig. 2. The Gini coefficient for analysed activities (in spatial-functional zones in Cracow)
I – operational services, II – financial services, III – renting, letting and leasing, IV – computer services, data processing and data base activities, V – engineering services, R&D activities, VI – legal services and bookkeeping, VII – professional business services
Source: Author’s calculations

Fig. 3. The spatial pattern of professional business services
Source: Author’s calculations
4. MAIN BUSINESS AND PRODUCER SERVICES CLUSTERS

In order to distinguish the BPS clusters\(^2\) (concentrations) the isopleth map (figure 5) was constructed. The area of Cracow was divided into squares 500 x 500 meters. The density interpolation (reversed distances) method was implemented (Magnuszewski, 1999) using Surfer software. Four services clusters were

\(^2\) The term *cluster* is not used in terms of Porter's definition (1990), but to describe spatial concentration.
identified on the basis of the analysed map. Two densest concentrations (A and B) were called first-tier clusters.

Fig. 5. The spatial pattern of service establishments in Cracow
A–D – analysed clusters
Source: Author's elaboration

The highest concentration was observed in the historical, medieval city (central zone I). The functional change and shift towards services in that area were noticed from 1970s (Górka, 1986). This is the concentration of the most important establishments. A relatively large number of banks (figure 6) and professional business services is the characteristic feature. These services constitute 3/4 of total number of BPS establishments in the central zone I. These two groups of activities require prestigious locations and estates which are usually pre-war residential buildings. However, the medieval city centre does not resemble morphologically the typical American CBD, or the Warsaw centre. It should be pointed out that the scale of concentration of consulting companies is lower than in Warsaw. About 32% of the establishments is located in the Old Town, as compared with 49% in Warsaw (Wilk, 2001).
The second densest cluster is the smallest, with heavy concentration limited by Zarzecze, Armii Krajowej, Piastowska and Lea Streets (cluster B). There is more than ten office buildings constructed under socialism. Lea Street, with many computer services’ establishments, e.g. the headquarters of Solidex adapted from an old office, the branch of 2Si (Systemy Sieciowe) and the group of Optimus offices, is the main development axis.

Two clusters, of lower density (60 establishments per 1 km²) than those mentioned earlier, were distinguished as second-tier (C and D) ones. The large number of service establishments is concentrated south-west of the Old Town (cluster C). The shape of this spatial cluster resembles a tail beginning in the central zone I and ending at Salwator. The great role in this cluster is played by offices housed in the socialist office buildings (e.g. at Na Stawach Square). It was noticed that there are many buildings with one service establishment on the ground or first floor. The prestigious character of cluster C is forming, which may be shown by the overrepresentation of professional business services (figure 6). The number of establishments of the basic activities is below the average value for Cracow.

![Graph showing share of analysed activities in total number of BPS establishments](image)

**Fig. 6. The structure of services provided in the clusters.**

Explanation: See figures 2 and 5
Source: Author’s calculations

The last cluster (D) is a polygon limited by: Mogilska, Lubicz, Grzegórzecka Streets and Pokoju Avenue, and by railways in the east and west. Groups of enterprises concentrate in office buildings, not only in socialist ones,
but also in newly erected ones. There are fewer professional business services here (figure 6). The domination of security entities and small legal and bookkeeping firms (located in the neighbourhood of the court) was recorded. The degree of functional specialisation turns out to be quite remarkable in the case of some clusters. Professional business services dominate in the central zone. The Lea cluster has attracted the computer activities (especially important firms). On the other hand, these clusters are in general polifunctional, because offices of trade and industrial companies accompany BPS establishments. The spatial pattern of BPS follows the multinucleated or multipolar model (Fuji and Hartshorn, 1995; Howells, 1988). The existence of several service clusters outside the core is not the result of urban planning on BPS, because such policy has not taken place in Cracow. The spatial pattern seems to have quite a reasonable shape. Firstly, the concentrations are not overdeveloped besides the city centre and Lea cluster. Secondly, there is more than one spatial direction of development. The clusters are located both in the western and eastern districts of the city. In contrast to the domination of industrial areas in the east and south, BPS tend to develop along the north-west and east axis.

5. SPATIAL PROCESSES

Three types of processes were distinguished in the spatial behaviour of enterprises: relocations, expansion and spin-offs. The relocation among service firms is more common than among industrial ones. The research carried out by Wilk (2001) showed significant spatial mobility among consulting companies. In Cracow it is true in the case of computer services. The Polish-owned Comarch in the middle of the 1990s carried out its business on the fourth floor of the Academy of Metallurgy and Mining building. Nowadays Comarch capital group has its establishments in various quarters of the city. The third Polish Internet portal Interia.pl is housed in the old part of Nowa Huta district.

Some companies begin their business at the universities and polytechnics. It should be noted that the Technical University, the Academy of Metallurgy and Mining and the Jagiellonian University trigger spin-offs, although it is quite difficult to assess their scale.

The quarters located between Nowa Huta and the city centre (e.g. Czyżyny) are an interesting example of development. This newly developed buffer becomes the core for mostly non-industrial activities like hypermarkets or entertainment facilities (Micek and Wiedermann, 2003). Additionally, there were several relocations of larger companies, e.g. Comarch headquarters to
Cracow’s Technology Park – Special Economic Zone Czyżyny. Seven software companies are going to invest over 20 mln USD in Czyżyny.

The main reason of dispersal of banks was the expansion of establishments (table 2). The dispersal connected with the expansion of banking networks towards the high-rise building quarters was clearly recorded. Additionally, in the case of banks there is the increasing importance of the local centres (the Main Square, the Central Square of Nowa Huta) and commercial ribbons (Berry, 1963) such as Kalwaryjska street. However, the greatest concentration of headquarters and branches (reaching 40% of total number) takes place in the central zone II. The lower number of such establishments was recorded in the Old Town (except establishments at the Main Square). On top of that, there were 8 relocations from the central zone I towards the fringe in 1995–2002.

<table>
<thead>
<tr>
<th>Activity type</th>
<th>Typical location</th>
<th>Typical premises</th>
<th>Dominant spatial process</th>
</tr>
</thead>
<tbody>
<tr>
<td>74.6. Investigation and security activities</td>
<td>Transitional and high-rise buildings zones</td>
<td>Adapted warehouses and rooms, old office premises</td>
<td>No dominant process</td>
</tr>
<tr>
<td>65.12. Other monetary intermediation (banks)</td>
<td>Central zones: II and I</td>
<td>Ground floor of high-rise and office buildings</td>
<td>Expansion, few relocations</td>
</tr>
<tr>
<td>72.6. Other computer related activities</td>
<td>Transitional, high-rise buildings, suburban zone</td>
<td>Pre-war, residential and office buildings, family houses</td>
<td>Relocations, expansion</td>
</tr>
<tr>
<td>74.12.3. Auditing activities</td>
<td>Central zones: II and I</td>
<td>Old, historic houses, office buildings</td>
<td>New set-ups</td>
</tr>
</tbody>
</table>

6. EXPLAINING THE SPATIAL PATTERN OF BPS

The services enterprise occupy various premises depending on the specific requirements of their activities. The majority of security enterprises are located in adapted warehouses or in socialist office buildings. Banks usually occupy the ground floors of pre-war residential buildings and high-rise or, more and more frequently, office buildings.

The offices in pre-war residential buildings are the most common locations of computer services. Few modernised residences house advanced computer activities (e.g. Motorola Software Centre). New office buildings are let by
several companies (e.g. Prokom at Rząska). Sometimes owners of IT companies decide to register their businesses in their family houses. It shows that low rents are sometimes crucial for computer services. The trend towards cheaper offices is confirmed by several relocations of smaller firms.

Locational dichotomy was recorded in the case of the ‘Big Four’ auditing companies. These enterprises choose both old, historic, highly prestigious pre-war residential buildings and A or B-class offices in new office buildings. They have one feature in common, which is the close proximity to the city centre and location prestige. PricewaterhouseCoopers (PWC) has been letting one and half storeys at the Office Centre Lubiecz for over two years. Earlier PWC used the office space in the Herbewo complex on the area with the long-established, highly-esteemed industrial tradition, in the Słowackiego Avenue. Location policy introduced by the ‘Big Four’ companies in Cracow reflects the long history and tradition of the city.

Location is determined by sector specific characteristics as well as place and zone-specific features. There is a short description of location factors of business and producer services in Cracow.

The Old Town in Cracow, as well as other old city centres, face many barriers. They can be divided into four types: architectural-administrative, infrastructural, accessibility, cost. In old buildings there are some architectural restrictions connected with the possible redecoration of office space. The capacity and speed of IT networks is rather low in the city centre. The car traffic is limited to the minimum – the pedestrian and limited traffic zones were introduced fifteen years ago. There are high rents for office space in the Old Town, exceeding 10 USD per 1 m² (Micek, 2002).

Despite the rapid growth of services outside the city centre, the central areas (especially the Old Town) still remain the main location for BPS establishments. This process is connected with the conversion of former residential and basic services space to more profitable use, which began in the 1970s (Górka, 1986). The similar tendencies were recorded in Warsaw (Wilk, 2001), Poznań (Parysek, 1998) and Wrocław (Burnus and Miszewska, 1998).

However, the central locations are highly prestigious. Agglomeration economies such as proximity to the suppliers, customers and establishments of a similar branch still attract many companies here.

The public accessibility in the central zone II is better than in the Old Town. On the other hand, the zone of limited parking discourages from conducting business here. As the director of office space leasing company Herbewo International confirms, many customers resign from renting the office space here, because it is not accompanied by suitable car parks. Still, the location in the central zone II with reasonable rents, in the well-maintained pre-war residential buildings is quite prestigious.
It is claimed by the office space developers that the transitional zone is the most attractive place. Good transport linkages, close proximity to the city centre and suitable car park space are the advantages of this area. It especially refers to the western quarters of transitional zone, where the density of establishments almost reaches the level of the central zone II. It is partly the result of wide availability of office space in 14 old, socialist office buildings (each over 1,000 m²). Many companies located their businesses along the main streets leading out of the city, too.

Suburbs and rural-urban fringe are chosen by BPS because of the distance from the busy city life, suitable transport linkages and proximity of the airport. Wilk (2001) gets some insight into the main location factors. For services located peripherally from the centre the biggest importance is attached to premises characteristics (e.g. rent and property tax, distance from the owner’s residence) and neighbourhood features (safe and nice neighbourhood, esthetic and ecological values). It may be shown by the cluster B case, located in the western part of the city. Although the majority of offices were developed in 1960–1970s, it is still a very attractive place in terms of accessibility. Good private transport accessibility for commuters, relatively close proximity of the international airport and the highway ring are the advantages of this location. The construction of the GTC office park will improve the importance of this area in attracting BPS.

7. CONCLUSIONS

It should be pointed out that in regard to four dynamically analysed subclasses there was a the rapid increase in the number of establishments located in the transitional zone in the 1990s. The importance the suburban zone and rural-urban fringe in attracting business and producer services is slightly increasing. The majority of clusters are located in the city centre and in the western part of Cracow, lying north of the Vistula River. Southern and eastern parts of Cracow are underdeveloped in terms of BPS location. From this point of view Cracow resembles other large Polish cities, where socialist industrial quarters are still relatively less attractive for office activities in comparison to centrally situated sites. An exception to this rule could be Grzegórzki quarter in Cracow.

The dispersal of business and producer service establishments towards transitional zones seems to be typical of Poland’s large cities. The central locations face many obstacles: administrative, accessibility, infrastructure and cost. The tendency towards the location of business and producer services
mostly in the city centre is slightly decreasing in Cracow and Wroclaw. The lack of a typical central business district providing the administration, trade and services possibilities led to the fact that the historical centre served the entire region under socialism. The old, historic buildings were not planned to house such functions, their reconstruction led to their degradation and deterioration (Ziobrowski, 1996). On the other hand, the lack of formed CBD in the 1990s triggered many start-ups in socialist office buildings in different quarters. Consequently, a multinucleated (multipolar) spatial pattern of business and producer services in Cracow was formed in an unplanned way through intraurban spreading. The existing clusters of services are dispersed throughout the city. This type of spatial pattern is perceived as the most desirable in many European and American cities (Daniels, 1975). New office developments are located in different quarters of the city (Micek, 2003) and they may increase the importance of the existing concentrations only to a limited extent (B and C clusters). New developments are situated at the edge of the city centre – ‘New City’ (Nowe Miasto) at the Main Railway Station constructed by American Tishman Speyer Properties. There is already a high concentration of the most important public institutions as well as business and producer services. The newest developments at Lubicz Street can stimulate further growth of this area. It may also be expected that there will be some relocations to this cluster conducted by firms which require high quality space. Consequently, the Old Town will probably lose some business and producer services.

Undoubtedly the areas of the transitional zone, especially the western ones, will become more attractive in comparison to the city centre. The importance of local ribbons, located mainly outside the city centre (e.g., Kalwaryjska Street, Pokoju Avenue), may increase. We will probably observe deconcentration of business and producer services of larger companies towards suburbs in a more distant future.

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