Spatial differentiation of supply and demand for consumer services in Poland – in search of potential markets

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Abstract

This paper strives to analyse the mutual relationships between supply and demand for services in Poland. The study focuses on the current stage of development of consumer services in Poland, using the example of retail trade. The basic questions it aims to answer concern the visible differences in the supply and demand for services at the local level (poviats – counties), areas with a relative shortage (surplus) of service supply, as well as factors that could explain the relative attractiveness of certain areas in this respect. On the supply side, empirical analysis is based on a set of data concerning the number of retail outlets and the sales area, while on the demand side we analyse variables that could be used to determine an overall level of expenditure incurred by households (potential demand). The final part of the paper provides an analysis of socioeconomic characteristics that could explain why some of the poviats discussed show a surplus or a deficit of trade outlets.

Key words: services – demand and supply, retail trade, Poland, regions, area's attractiveness

Introduction

One of the main consequences of the transformation processes taking place in Central and Eastern European countries for over a decade now is the increasing significance of the service sector in the economy. This phenomenon is characterised by a varying dynamics in each of the region's countries, depending on the current level of socioeconomic development or the adopted transformation strategies (e.g. in the sphere of privatisation). In the case of Poland, in 2001, 64.8% of gross added value in the economy was generated by the service sector, while the sector's share in the labour market was 48.5%. Over the last decade, the latter indicator increased from a level of 41% in 1992.

Owing to an inherently heterogeneous nature of the service sector, it seems well founded to analyse its individual components, differing in the role and dynamics of change. The basic constituents of the third sector include commercial activity, both wholesale and retail. The special role of trade is manifested in the analysis of national accounts and the labour market: it generated 20.5% of gross added value, with a 14.7% share in the number of the working population in 2001. At the same time, those employed in retail and wholesale trade accounted for about one third of the aggregate number of people employed in the service sector in Poland.

Similarly to the majority of service-providing business entities, enterprises operating in the trade sector are relatively small and usually family-owned. If we consider that in 2001 nearly 1,035 thousand people worked in over 432 thousand stores, it means that, statistically, slightly over two persons were employed in one such outlet. In this respect, the trade sector in Poland in the decade of the 1990s did not manifest any concentration tendencies.

The privatisation process of former state-owned trade establishments, the growing presence of foreign trade companies in the Polish market and the resulting innovation in the ways of distribution were all characterised by a considerable differentiation in space. The occurrence of such disparities attracted the understandable interest of geographers. The growing number of geographic studies by both Polish and foreign authors discusses the problems related to the role of trade in Poland's economic space. To name some, they focus on the changes in the geographical structure of the entire trade sector (Taylor 2000, 2001) or its selected aspects, e.g. trading in marketplaces (Werwicki 2000). Apart from studies by geographers from outside Poland (e.g. Pütz 1998), they rarely discuss the underlying causes of such deep transformations in this sphere of the economy. This paper is intended to partially fill in this gap as regards the scale and reasons for differences in the spatial distribution of trade outlets.

On the assumption that there exist distinct interregional disparities in the quality of customer service, we will try to show the scale of this differentiation at the level of 16 voivodships (regions) and over 370 units of the second tier of the administrative structure (poviats – counties). Multiple regression analysis was applied to identify factors most strongly affecting the existence of spatial disparities in the density of the trade outlets' network. We took into account many characteristics regarded as variables explaining, directly or indirectly, the size and the character of market areas (cf. Ghosh, McLafferty 1987, Salvaneschi 1996, Clarke 1998). In the case of local-level analysis (poviats), revealing differences between the actual trade offer (expressed as the number of outlets) and the potential demand is intended to identify areas which are relatively disadvantaged in terms of trade services supply. Such identified areas with a potential for the development of trade were additionally characterised with regard to the possible causes of underinvestment concerning the number of trade outlets.

The supply side – development of retail trade in Poland

The fundamental changes that took place in the entire service sector in Poland in the 1990s, and particularly in the retail trade sector, can be ascribed to at least several reasons. The most important of them include: the progressing deregulation of the market, the liquidation of monopolies, the privatisation process and internationalisation of trade as a result of significant foreign capital expenditure in the development of trade networks.

For over a decade now, there have been attempts to remove barriers and limitations to starting business activity, which existed under the centrally planned economy. This resulted – in some cases – in an uncontrolled increase of trade outlets with large sales area (supermarkets and hypermarkets) run by foreign entities, which regarded the lack of any significant limitations as one of the advantages of the Polish market.

It was not until 2001 when certain limitations in the location of large trade outlets were introduced, partly in response to protests expressed by representatives of small Polish trade companies. These limitations, in extreme cases permitting to block the investment project, pertain to outlets with large sales area. Depending on the size of the gmina (municipality), there are additional procedures that have to be followed by investors wishing to build stores with a sales area of over 1000 m^2 (in gminas with a population up to 20 thousand) or that of over 2000 m^2 in gminas inhabited by more than 20 thousand people.

In the 1990s, the role of the private sector in the economy was considerably increased, which was also visible in the trade sector. Currently, the trade sector is one of the most privatised spheres of national economy in Poland. In 1990, the share of the public sector in gross retail sales was nearly 64%, to fall down to 2.3% in 2001. Over this period, the number of shops in the public sector diminished from over 14 thousand to mere 1.9 thousand (with a total of nearly 432 thousand outlets).

A distinctly visible manifestation of changes occurring in the Polish retail trade is the growing presence of foreign investors. Factors that push companies out of their domestic markets include saturation of the indigenous market and limiting the freedom of activity (Alexander, Lockwood 1996). Nonetheless, Poland still remains an attractive market, drawing in this kind of investment. Trade activity is the third largest – after industrial processing and financial brokerage – sector absorbing foreign investment. According to the data of the State Agency for Foreign Investment (PAIZ), FDI in trade until the end of 2002 totalled nearly USD 7.6 billion. In 2002 alone, investment in trade accounted for 17% of all foreign investment in Poland (1.05 of 6.06 billion USD, PAIZ 2003). Among the largest investors, there are companies from the European Union, which play a leading role not only in European trade.

Tab. 1 Largest foreign investors in the trade sector in Poland

Company	Country of origin	Position in the ranking of the largest investors	Aggregate value of investment (until end of 2002)
Metro AG	Germany	12	1125
Casino	France	14	923
Tesco Plc	United Kingdom	15	850
Carrefour	France	16	815
Auchan	France	22	659

Source: PAIZ (2003)

The trade sector seems to play similar role in Central European countries in case of foreign direct investment. At the end of the year 2001 the share of trade sector within total FDI fluctuated from nearly 10 per cent in Slovakia, through over 12 per cent in Hungary, to over 16 per cent in Czech Republic. The trade was the third most attractive sector for FDI in Poland and Slovakia, the fourth in Hungary, but the second in Czech Republic (Foreign… 2002).

Taking into account the scale of investment in Poland, German, French and British companies are in the lead (Tab. 1). They are also the largest retailers in Poland. According to revenue data from the year 2002 (Top 50, 2003), there ware few companies registered among top ten retailers in Poland, Czech Republic, Slovakia, and Hungary (Metro, Tesco). Four next companies ware well established within three of over mentioned countries (Carrefour, Ahold, REWE, Tangelmann). Some differences between analysed countries existed only in terms of market share of these big players, as in their presence within different retail market segments (e.g. hipermarkets or discount stores).

With respect to the strategies of entering the Polish market, foreign retail companies prefer organic growth (construction of their own trade facilities), joint ventures, franchising and company takeover (including both Polish and foreign entities). The impact of foreign enterprises on the trade market is primarily seen in the expansion of outlets with large sales area, including supermarkets, hypermarkets and discount stores. This leads to changes in the sales structure in retail trade. The share of large sales-area trade in total trade sales – despite the divergent estimates ranging from several to over 20% (Kłosiewicz-Górecka 2002b) – is still much lower than the respective figures in France, Great Britain or Sweden.

Even though there exist enterprises managing sales outlets with large sales area, with Polish and mixed ownership, the vast majority of such facilities are owned by companies with foreign shareholdings. Although foreign investment in trade has by now embraced the whole country, some regions are more popular with foreign investors than others (Tab. 2). Of 190 hypermarkets operating in Poland in 2001, about one third were situated in two regions: Silesia and Mazowsze.[1] The second group included five voivodships (regions): Łódzkie, Dolnośląskie, Małopolskie, Pomorskie and Wielkopolskie. Altogether, in those seven voivodships, inhabited by 63% of the country's population, 77% of all hypermarkets were located. The largest cities remain the first and foremost target for such investment, and it is there that most hypermarkets have been built. They are the capital seats of the aforementioned regions: Warsaw, Łódź, Kraków, Wrocław, Poznań and Gdańsk.

The distribution pattern of supermarkets resembles the one described above, with some minor changes. The presence of such stores is definitely stronger in the Śląskie voivodship, with Pomorskie at the other end of the scale.

Retail trade in Poland is dominated by small, family-owned companies, running outlets with a small sales area. According to the data of the Central Statistical Office (GUS), the dominant group of entities (physical persons) owns one or two shops. Thus, in 2001, over 400 thousand outlets could be regarded as classical, independent shops. Since 1995, a trend for increasing organisational integration can be observed, with a growing number of entities running 3 to 10 shops. In the remaining groups, either a decrease in the number of entities (running from 11 to 50 shops) or stagnation (in the case of entities running over 50 outlets) is observable.

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[1] Unfortunately, there is no credible data about the change of spatial pattern of hipermarkets in Poland. Official statistics (GUS) shows only 99 such entities at the end of 2000, and 216 at the end of 2002. Older statistics refers to retail outlets with sales area more than 2500 m², but embrace also department stores. Generally, firms focused on hypermarkets entered the most lucrative regions first (those with large cities, starting from Warsaw).

Domestic enterprises, aware of the increasing competition on the part of foreign companies expanding their networks, recognised the need for integrated activity and networking. However, studies of the attitudes of Polish entrepreneurs point to serious barriers to the development of such networking. The most important obstacles include lack of belief in benefits from cooperation and fear of losing independence (Kłosiewicz-Górecka 2002a). For the companies, which got engaged in the integration process by joining various networks, the main problems lie in inability to cooperate, unclear division of competencies, functions and benefits among the members, and lack of mutual loyalty.

Tab. 2 Stores in Poland in 2001 (by voivodships)

Voivodship	Number of stores			Sales area of stores	
	total	Supermarkets*	Hypermarkets*	total (in thous. of m²)	In rural areas (% of total)
Dolnośląskie	32,987	141	16	2,192	14.5
Kujawsko-pomorskie	25,983	108	12	1,712	19.0
Lubelskie	23,088	91	5	1,499	27.2
Lubuskie	11,650	61	3	866	17.7
Łódzkie	28,818	140	18	1,907	17.4
Małopolskie	34,419	120	15	2,178	23.5
Mazowieckie	60,736	173	31	4,560	19.9
Opolskie	10,673	69	2	910	26.4
Podkarpackie	22,370	90	3	1,321	29.5
Podlaskie	11,945	60	6	1,013	16.6
Pomorskie	24,727	80	15	1,999	16.5
Śląskie	52,369	247	37	4,297	12.3
Świętokrzyskie	14,581	45	3	983	31.1
Warmińsko-mazurskie	16,776	71	3	1,075	16.7
Wielkopolskie	38,882	146	15	2,648	21.6
Zachodniopomorskie	21,987	97	6	1,639	14.5
Poland total	**431,991**	**1739**	**190**	**30,798**	**19.2**

* stores with the sales area 400–2499 m² (supermarkets), and 2500 m² and more (hypermarkets)
Source: Rynek wewnętrzny w 2001 r. (2002): Warszawa: GUS

In Poland exist only small regional difference in regard to the structure of shops by specialization. General foodstuffs stores are slightly over-represented (as per cent of all stores) in south-eastern Poland, the share of fish stores declines from the north to the south. Less than average share of meat stores ware observed in the regions along the Polish eastern border. Car sales outlets are slightly more concentrated in two regions: Silesia and Mazowsze.

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The distribution of stores and sales area between towns and rural areas is uneven. In 2001, 38% of Poland's population were living in rural areas. 23% of all trade outlets were located there; they accounted for 19% of the aggregate sales area in the country. Although statistically there were 2 shops per one village, they normally were very small. In 2001, the density of the shops' network was two times smaller in rural areas than in towns. While one shop in rural areas served 149 people on average, the respective figure in towns was only 72. The share of sales area in rural shops is regionally differentiated (Tab. 2) and is definitely the highest in south-eastern Poland (Lubelskie, Podkarpackie, Świętokrzyskie), and the lowest in Silesia (Śląskie, Dolnośląskie, excluding Opolskie voivodship).

Taking into account the total number of outlets, their distribution pattern cannot be considered as accidental. According to the generally acknowledged principles of trade outlets location in the vicinity of the potential customers' residence, the number of shops and stores operating in individual voivodships is highly correlated with their population. A similar but weaker interdependence can be seen between the population and the size of the sales area.
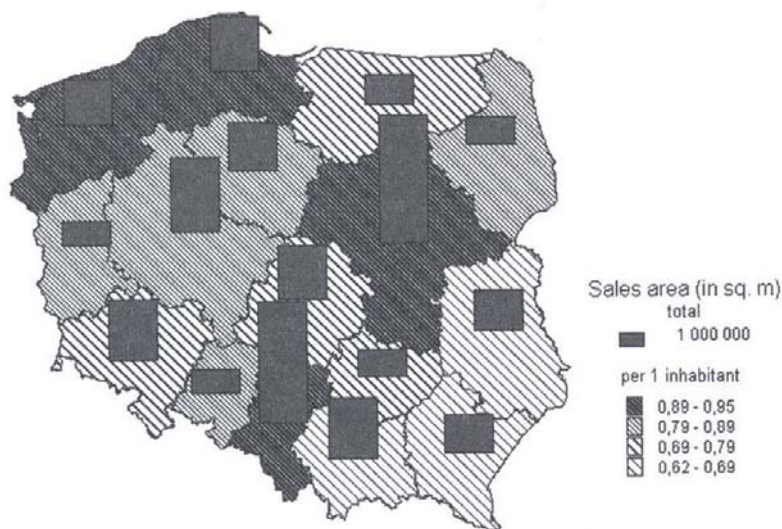

Fig. 1 Sales area in stores by voivodships (2001)
Source: author's own analysis based on: Rynek wewnętrzny w 2001 r. (2002), GUS

Distinct differences in the accessibility of trade services can be seen between individual regions. As a measure, we can use both the number of population per one trade outlet and the size of the sales area per capita. In the latter case and on the national scale, in 2001 the sales area per capita was 0.8 m^2. The respective figure, however, oscillated between 0.62 m^2 and 0.95 m^2 per capita. The most favourable situation in this respect was observed in four voivodships: Zachodniopomorskie, Pomorskie, Mazowieckie and Śląskie (Fig. 1), while the worst indicators were recorded in south-eastern Poland (Małopolskie, Podkarpackie and Lubelskie voivodships).

The regional disparities will deepen if we analyse smaller spatial units. At the level of 16 voivodships, in 2001 the accessibility of trade outlets (measured by the number of people per one outlet) oscillated between 79 and 102 persons (1 : 1.3). In a similar

analysis conducted for 373 poviats, the disparity indicator increased to 1:4.7, with marginal values of 42 and 199 persons per one shop or store. Among 25 poviats with the worst indicator values, there were as many as 16 towns having the poviat status which, following the 1999 reform of the country's administrative division, lost their voivodship capital status.

If we compare the accessibility of trade outlets within individual voivodships, the most considerable disparities could be observed in the eastern poviats, while the most insignificant differences were noted in the west of the country. The biggest disparities were observed between the poviats of the Lubelskie (1:4.2), Podkarpackie (1:3.3) and Mazowieckie (1:3.2) voivodships, and relatively the smallest – in the poviats along the western border, with Lubuskie (1:1.6), Dolnośląskie and Zachodniopomorskie (1:1.9) manifesting the least intraregional differences.

Satisfaction of demand – potential markets

The analysis of the distribution of trade outlets, both with regard to their number and density, presented so far discusses only one aspect of the issue – the supply of trade services. The private character of the majority of retail trade enterprises in Poland invites the conclusion that they are situated in areas with at least a satisfactory level of demand. However, some verification of the volume of local demand for trade services should nonetheless be made. This will allow to identify areas (poviats) characterised by a relative surplus of trade services and/or areas where the network of trade outlets could be expanded further. This would also provide an opportunity to at least partially confirm the role of factors which, in both theoretical considerations and empirical research so far, have been regarded as important in defining the size of market areas in the trade sector.

Clarke (1998) writes that geographical research on the location of stores has undergone several stages. Initially, studies were very simple analyses conducted by the investor only with respect to one location (assessment of its advantages and dis-advantages). They should be regarded as extremely subjective, solely relying on the experience of a single decision-maker. In subsequent attempts, a different method was quite commonly applied; it consisted in an analysis of the available data concerning potential locations, with a view to obtaining as much information as possible about the prospective location. Among many factors taken into consideration in this approach, referred to as the checklist approach, socio-demographic characteristics of the local population were the dominant ones. The knowledge of the population structure and other characteristics of a given area allow to assess its attraction potential. This type of research can be encountered nowadays, since the appearance of geographical information systems in a version allowing for spatial modelling. For instance, the application of GIS has made it possible to substantially extend the list of analysed factors. In more recent analyses, particularly those concerning new stores in an already existing network, usually the comparative technique (analogy) is used – when sales levels in a new outlet are forecasted, the operations of other stores functioning in similar conditions are taken into account (location, characteristics of the market area). Frequently, the regression technique is used for this purpose.

Economic geographers usually list several variables in the group of factors used to assess the potential market for trade services. If we define the market as a group of consumers, according to approach adopted by Jones and Simmons (1993, p. 28–29), we can analyse several market aspects: location, revenues, social characteristics of the population, preferred lifestyles. Location refers to the market area (from the neighbourhood, through the town to the national economy at large). The size of the market is normally defined by the size of the population (households)), and, even more accurately, the aggregate income in a given area. The social features of the population which are of significance for the diversity and character of the market usually include such factors as the age and sex structure as well as the structure of households. Additionally, the lifestyle prevailing in a given area or social group also largely determines market behaviours. Thus, the analysts' tenet (Jones, Simmons, q.v.) that each of those frequently a-spatial features makes it possible to better characterise the size of the real, spatially defined market, seems to be well justified.

However, not all criteria thus defined may be comprehensively characterised, since usually there are no reliable, updated and sufficiently detailed (for small spatial units) data. Following the pattern outlined above, for purposes of further analysis, the scope of individual markets was limited to the boundaries of administrative units, i.e. poviats, and over 370 potential market areas were subject to analysis. The size of the market has been described using several variables relating to the demographic and income situation. In addition to the size of the population (including the sex structure and share of the individual age groups), social and occupational features were taken into account (share of the employed in individual sectors of the economy, unemployment rate). In keeping with Salvaneschi's (1996, p. 77) suggestions, this set of features was supplemented by certain characteristics describing the mobility of the local population (balance of migration). Owing to the lack of detailed data on the income level in each of the poviats, variables illustrating average pay as well as the volume of personal income tax in a given area were used in order to estimate it.

However, the size of the market (its overall potential or attractiveness) is only the demand size of the location analysis. Ghosh and McLafferty (1987, p. 35–36), comprehensive analysis of the market potential cannot be confined to the demand side; it should also have references to the level of competition in a given market, usually estimated on the basis of the number of trade outlets in a given area. It is only the mutual interplay between supply and demand that creates market opportunities. In the Polish context, the considerable number of marketplaces is a semblance of competition, since there some of the demand for trade services is satisfied. Therefore, this study takes into account the number of marketplaces, as – albeit deficient – characteristics of the level of competition.

It should be added that the attempt to apply the regression technique to estimate the demand for store services is not a new research approach, also in the Polish geography. Such an attempt was made in the early 1970s (Nowosielska 1972), when trade was operating in completely different legal and organisational conditions and had a different structure (e.g. ownership structure). At the time, the actual distribution of trade services (supply measured by the number of the employed) was compared with the supply defined using a model. However, the spatial scale of research (only at the regional

level) and problems with estimating the volume of demand resulted in another analysis, conducted on a more detailed spatial scale.

According to the principle of analysis based on the multiple regression method, the number of shops and stores in 2000 was adopted as a dependent variable, and an attempt was made to try and correlate it – in subsequent attempts – with many factors (independent variables) which can affect the degree of development of the trade network. While conducting research, the reservations to applying the regression method in this kind of analysis were taken account of.[2] Although they do not disqualify the method as such, such reservations should imply a certain degree of caution in formulating conclusions based on such analysis. According to Clarke (1998, p. 291), many of these weaknesses could be eliminated by a thoroughly conducted analysis and a careful conclusion process.

The results of the analysis confirmed a substantial impact of the variables included in the research so far on the number of shops in individual poviats. Two independent variables had the strongest impact: the size of the population and the personal income tax. The use of those two variables only allowed to explain 97.5% of the variables in the number of outlets. The introduction of more variables to the model only insignificantly changed the value of the determination coefficient (R^2), to a level of 0.982. The ultimate regression model took three more variables into account – the share of the employed in services, the feminisation coefficient and the average pay. Interesting observations include the negative correlation between the number of shops and the level of average salary and the lack of any considerable impact of the number of the employed in the service sector, divided into two segments (the so-called market and non-market services).

As a result of the analysis, a spatial distribution of areas was proposed, where the supply of trade services (the number of outlets) seems to be relatively small in comparison to the average condition in the poviats. In this kind of search, the application of regression residue (Robinson 1998) seems to be useful in the identification of specific areas for further research. Racine and Reymond (1977) suggest that the cartographic analysis of residue is of special importance in this case, as it allows to identify the occurrence of homogenous areas. To this end, the principle was adopted that positive residue value indicate areas with a relative surplus of outlets (higher market penetration), while the negative value illustrates the distribution of markets with certain additional potential for growth. The resulting picture invites interesting observations (Fig. 2). 40 poviats have been identified which can still be considered as attractive in view of the development of trade outlets. For these administration units, the number of shops and stores estimated using the regression model was higher than the actual number at least by the double value of the standard error. A similar procedure (the estimated value lower than the existing one) has been applied to identify poviats where the market can be regarded as saturated in terms of the number of trade outlets.

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[2] Ghosh, McLafferty (1987), Clarke (1998) and other researchers wrote about the deficiencies of this kind of approach; they will not be discussed here for lack of space. The basic problems involved include the assessment of the location (market) without fully taking competition into account, heterogeneous internal structure of outlets (which are often specialised stores), the need to use only independent, uncorrelated variables in this model.

The majority of poviats with a relatively small number of outlets is situated in southern and south-eastern Poland, with some "isles" occurring along the eastern border. At least two larger clusters of poviats having a potential for market development can be observed. One of them lies in the southern part of the Małopolskie voivodship and embraces the Tarnów, Nowy Sącz and several neighbouring poviats, while the second, consisting of a larger number of units, is located in the Śląskie voivodship and covers the poviats of: Gliwice, Zabrze, Siemianowice Śląskie, as well as an area lying west of those poviats.
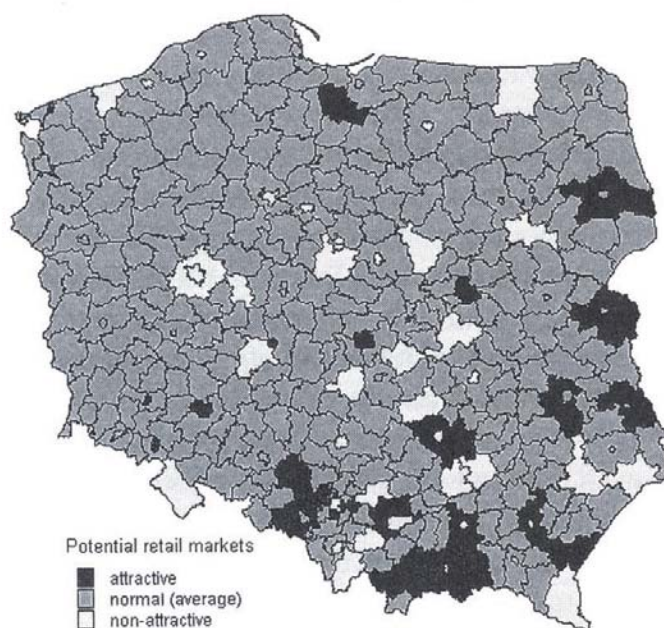

Fig. 2 Potentially attractive and non-attractive markets for the development of trade outlets (based on residuals from regression in respect of standard error of the estimate)
Source: author's own analysis based on GUS data

At the other end of the spectrum, we have counties where the number of outlets is higher than that estimated using the regression model. The distribution of those units does not manifest any distinct spatial concentration. Despite the scattered character of the distribution, these areas seem to have certain characteristics in common. For instance, about a half of them are towns with poviat rights. This group includes large cities (e.g. Kraków, Poznań) as well as smaller towns, former (until 1999) seats of voivodship authorities (Zamość, Słupsk, Płock, Włocławek, Radom, Ostrołęka, Tarnów). A more detailed analysis of the map indicates a likely reason for the relatively higher level of the trade offer in this group of towns. The map shows that there are pairs of rural poviats and towns with poviat rights that neighbour on one another, where small supply of sales area in a rural poviat corresponds to a relatively high number of outlets in the neighbouring towns. This group includes such towns as for example Częstochowa, Ostrołęka, Płock, Radom, Tarnów, Zamość, along with the adjoining rural areas. This suggests the possible existence of markets that are supplementary in terms of demand and supply in some regions, where the population from the areas in

the vicinity of the town make use of the better developed trade network there. However, this regularity does not apply to the former voivodship capitals, which probably means there are some deeper causes of the existing disparities.

Attractiveness (non-attractiveness) of some areas

The group of poviats discussed above and characterised by a relative shortage or surplus in the number of trade outlets (Fig. 2) invites to seek an explanation of this phenomenon. One of the possible approaches to take is to determine the specific characteristics of such a set of spatial units, which differentiate them from all other poviats, where the density of trade outlets is much higher.

The set of poviats was divided into three groups. Two basic ones include poviats with a relatively high demand for trade services and a relatively high density rate of trade outlets. The third group consists of poviats manifesting weak symptoms of a relatively high saturation of the market or a shortage in the number of trade outlets. The latter group may be considered as a context, a frame of reference for the situations in the groups with the most distinctly evolved structure of the trade services market. The groups were named, respectively: attractive markets (a relatively acute shortage of trade outlets – 40 poviats), non-attractive markets (saturated – 37 poviats) and the reference group, i.e. the remaining 296 poviats with a relatively average development level of the retail trade networks.

It is difficult to find indicators that would unequivocally help to explain the differences in the number of outlets in the specific groups of poviats, outlined above. However, the researched groups of poviats can be described referring to the differing development levels of certain spheres of life.[3] Owing to the uneven number of poviats in each of the analysed groups, average values for specific features in each group were used for comparison. In terms of the demographic situation, attractive markets are larger on average. The differences in this respect, however, were not very significant: 200 thousand people versus 170 thousand (on average) in the attractive markets group. No significant differences were revealed as regards the feminisation rate (in both core groups it was 109 women per 100 men) or the migration balance. However, the specific character of non-attractive markers lies in negative birth rate figures (–0.3 promille). On the other hand, this value in areas with a relative shortage of shops was positive (0.3 promille). Furthermore, attractive markets are characterised by a distinctly lower divorce rate.

The low attractiveness of 37 poviats can also be attributed to a higher level of competitiveness in trade. This is particularly true for two aspects, the density of outlets and the impact of the marketplace trade. In 40 poviats which could be described as attractive markets, one shop or store served 100 people on average, while the respective figure in the opposite group was only 71. The presence of marketplaces, strongly rooted both in tradition and in space, can also be regarded as a factor that is not conducive to the development of trade in shops and stores. The network of all-year marketplaces was denser in "non-attractive" poviats, with 18 thousand people per one marketplace (versus nearly 21 thousand in the second group).

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[3] Further analysis is based on calculations drawing on the statistics from the Regional Databank of the Central Statistical Office [www.stat.gov.pl].

With regard to the traditional division of the economy into three sectors (agriculture, industry and services), the groups of poviats under research manifested a similar employment structure. In 2000, non-attractive markets were characterised by a higher average of employment in industry and in the so-called non-market services (such as administration, education, health care). On the other hand, the labour market in poviats with less developed trade sector seemed more robust, which could be inferred from a lower unemployment rate (by one percentage point) and a lower percentage of people remaining jobless for a period longer than two years.

The character of the labour market, outlined above, was reflected in the wealth level of the local population. The purchasing power of residents (households) was determined on the basis of the volume of assessed personal income tax per one employed. In "attractive" poviats, the volume of assessed tax was by 15% higher than the respective values in 37 "non-attractive" poviats. This 15-per cent difference meant over 100 zlotys more in tax. Based on this, it is relatively easy to assess the average disposable income.

Furthermore, the characteristics of the completed economic transformation, the effectiveness of which is manifested e.g. through the ownership structure of enterprises, added to the diverse picture of the socio-economic transformation in the analysed groups of poviats. The markets termed as non-attractive had a higher share of state-owned enterprises, with a weaker presence of commercial companies, especially those with foreign shareholdings.

Also, the differences in favour of attractive markets as regards the management and volume of tourist traffic should be emphasised (a higher average number of beds, nearly twice as high average number of accommodation provided). In addition, the sphere of cultural services seemed to offer more in this group of poviats, particularly with respect to cinemas (average number of screenings and viewers).

Conclusions

Search for answers posed at the outset of the research invites several conclusions. First of all, even if we embark on an extensive and thorough analysis using a broad spectrum of methods and explanatory variables, we should not overlook the dynamic nature of the phenomenon subject to such analysis. Such is a situation in the majority of spatial analyses, examining the quickly changing distribution patterns. In the case of services, that is, activities showing less i population inertia than e.g. industry, the distribution patterns of facilities in a given area are usually of a momentary nature. This reservation should be taken into account in all research projects concerning the condition of Polish economy which – similarly to the majority of national economies – is in a state of constant flux.

Secondly, the supply of trade services depends on a host of factors. The number, size, ownership and branch structure of outlets – they all adapt to the ever-changing market. In the retail trade sector in Poland, the changes that occur move towards an increasing share of large-area stores, frequently managed by foreign enterprises. The domestic trade, definitely scattered, dominated by family-owned, independent shops and stores, is aware of the looming threats and is making some attempts as integration.

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The degree of development of the trade network, measured by the sales area per capita, is the highest in the Mazowieckie and Śląskie voivodships as well as Pomerania, whilst the worst situation in this respect is encountered in south-eastern Poland.

Thirdly, in terms of demand and market potential, southern Poland seems to offer the best opportunities for the development of trade networks. Subjecting smaller administrative units (poviats) to analysis allowed to identify more detailed disparities between the regions. At the same time, with the exception of a part of Silesia and Little Poland (Małopolska), potential markets are insular in nature and are limited to individual poviats.

Fourthly, such a spatial picture of retail trade largely depends on the market potential. This, in turn – according to the findings of the regression analysis – can best be determined by observing the spatial variable concerning the size of the population and the level of income. Other characteristics, such as the share of employment in certain sectors of the economy (e.g. in services) are of secondary significance as regards the explanation of the density of the trade network.

Spatial pattern of Polish retail market will changes in the near future. One of the important factors will be EU accession. According to the opinion of market research companies, Poland comes out as the new destination for over 100 international retailers over the five years till 2008 (EU accession, 2003). Even if the majority of them will be concerned with high street locations, there are reasonable premises that retail outlets network structure by 2010 will be different than present. It concerns both spatial and other characteristics of the market.

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