Young Researchers and the Problems of Polish Rural Areas

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COMPANY RELOCATION TO RURAL AREAS IN LARGE METROPOLITAN REGIONS IN POLAND – SCALE AND KEY CHARACTERISTICS

Introduction

Plant relocation has been a subject of interest to researchers for decades and the debate in the research literature remains lively. Business enterprises are forced to constantly respond to new events in the marketplace, changes in consumer trends, environmental regulations, technological processes, and many other factors. In many cases, the response to such events and factors takes on a spatial dimension. Location can become an issue when a company's local environment changes and relocation to another geographic area may become necessary. In other cases, a company's needs change over time and relocation may become necessary in order to grow or change in some other meaningful way (Pellenbarg, Wissen, Dijk 2002).

The spatial dimension of plant relocation and its significance in various spatial dimensions changes over time. Relocation on a global scale is currently a mainstream issue in the research literature. Plant relocation on a local or domestic scale is less often debated in the literature. However, it is relocation at the lowest spatial scale that appears to be especially interesting in terms of real processes occurring in each affected area or the real effects of plant relocation on local and regional communities.

The scale of economic activity is largest in major metropolitan areas, which often concentrate economic potential on a domestic and international scale. However, it is also true that many different factors are pushing businesses enterprises outside of city limits and often beyond the boundaries of entire metropolitan areas. The factors that drive this new change vary from place to place and include both push and pull characteristics.

The determination of the distance of plant relocation is significant in the creation of a theoretical basis used to analyze this process. Two distinct ways of approaching this subject need to be considered depending on the distance associated with a given plant relocation. Pellenbarg (2010) suggests that long-distance relocations tend to be associated with large companies, often global companies, and need to be analyzed using Myrdal's theory of cumulative causation. This theory

assumes that assets or resources are shifted away from less developed geographic areas to more developed geographic areas and tend to concentrate there.

On the other hand, short-distance relocations tend to be associated with smaller companies and need to be analyzed in terms of the incubator hypothesis and its later modifications (Hoover, Vernon 1962; Leone, Struyck 1976). Thus far, no one has attempted to test this hypothesis with relation to events and processes occurring in Poland. The purpose of this paper is to determine the scale and key characteristics of plant relocation in major metropolitan areas in Poland with particular emphasis on fringe areas of metropolitan areas – especially rural communities. It is important to note that major metropolitan areas in Poland include very large areas still considered to be rural. The results of the research study made it possible to test some of the key assumptions behind the incubator hypothesis.

Research methods

There are several different ways in which a company may change its location, one of which may also lead to a change in corporate status. The spectrum of change does include many different options such as corporate mergers, hostile takeovers, branch establishment, and migration of an entire company or its headquarters to a new site. This type of relocation does not presuppose a change in corporate status, as would be the case with a merger or takeover. This paper focuses solely on companies that do move to a new location, but do not change corporate status.

The research was conducted in several stages:

a) Identification of all companies doing business in five major metropolitan areas

The first stage of the analysis focused on fringe townships[1] located across five major metropolitan areas[2] in Poland[3]: Krakow, Lodz, Poznan, Warsaw, Wro-

[1] Township – a basic (local) administrative unit in Poland. The Township Governance Act of March 8, 1990 ("Journal of Laws of the Republic of Poland" 1990, No. 16, Item 95) defines the township as a governed community as well as a specific territory. Three different types of townships have been designated by Poland's government: rural townships, urban townships, urban-rural townships. Rural townships feature only villages or traditional European rural communities. Urban townships feature only cities. Urban-rural townships feature villages and at least one officially designated city.

[2] Experts from the Polish academic community including geographers, economists, and architects have defined the metropolitan area as "a major urban system that may be either monocentric or polycentric (multiple communities and other highly urbanized areas within a single system) and includes an area characterized by daily commutes to and from work as well as areas characterized by potential urban development and an adequate concentration of business and government functions supplementing those of the core city – along with substantial internal functional integration and a well-developed transportation network" (Markowski, Marszał 2006: 15).

[3] Two major metropolitan areas were omitted: Upper Silesia, Tricity – Gdansk, Gdynia, Sopot. Both metropolitan areas are polycentric in nature, which makes it impossible to make good comparisons with monocentric metropolitan areas.

claw[4] (Figure 1). This key step consisted of the identification of all operating business enterprises employing at least 10 workers, which had changed their plant or office location in the past. A similar type of identification was made in three core cities – Krakow, Wroclaw, and Poznan – with the key difference being that the companies had to employ 50 or more workers[5]. The latter identification process was facilitated via the use of a commercially available database – Hoppenstadt Bonnier Information – HBI, currently known as Bisnode Polska. The database contains telephone and address data for companies, which makes it possible to assign each company to a specific geographic area.

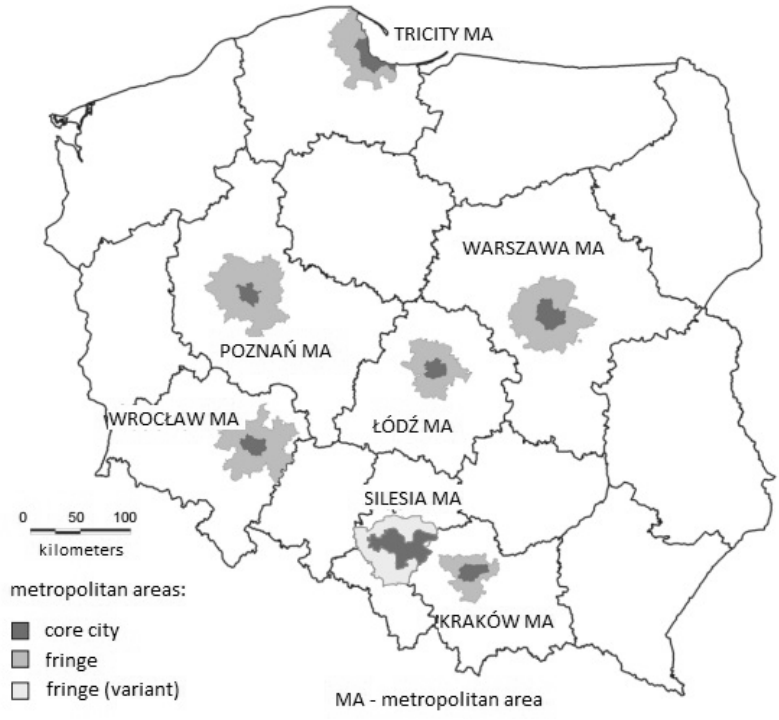


Figure 1. Major designated metropolitan areas in Poland in 2006

Source: Smętkowski, Jałowiecki, Gorzelak 2008

[4] Metropolitan area delimitation by Smętkowski, Jałowiecki, and Gorzelak (2008).

[5] Only three core urban areas were analyzed and only companies with fifty or more employees were analyzed due to the immense quantity of data associated with such analysis and the time constraints associated with this research study. Krakow, Poznan, and Wroclaw are treated as case studies of core cities located in major metropolitan areas in Poland.

A total of 6,240 companies[6] were identified in the study area, which had fulfilled criteria described earlier. It is important to note that all designated metropolitan areas in Poland are covered by this study. This study is entirely focused on areas designated "metropolitan areas" by Smętkowski, Jałowiecki, and Gorzelak (2008). This designation is quasi-official designation created in Poland for a variety of administrative purposes.

The HBI database is characterized by certain gaps in data. This basic problem was mitigated by also acquiring data from Poland's REGON business register[7] – data such as the number of companies based on size and geographic location (township). The use of both HBI and REGON data made it possible to show what percentage of registered companies in each studied township were identified in the study.

b) Scale of plant or headquarters relocation

The next step consisted of the acquisition of current and past business address data from Poland's National Court Register (Polish acronym: KRS). Each of the 6,240 firms studied is registered with KRS[8]. Two relocation categories were selected – internal and external. The former applies to relocation within a township. The latter applies to relocation to another township. While both internal and external relocations were studied, the focus of the paper is on external relocations. This method was used to help identify companies that have moved from one township to another in five major metropolitan area in Poland. A total of 2,155 companies were identified that had at some point relocated to a different site and 1,158 of these had relocated to a different township.

The relocation analysis in this paper covers the period 2001–2013. The start date is also the date of the establishment of Poland's National Court Register. The only data source that provided the most complete picture of company relocation in Poland was the Court Register. No other data source listed all address changes for all the studied firms. Hence, the paper analyzes address changes that have occurred since the Court Register began functioning in 2001, although many of

[6] There does not exist a more complete source of business telephone and address data in Poland for a large number of administrative units. This type of data are available at local offices of the Ministry of the Treasury, but these data are usually not made available to researchers. In addition, each office is an independent entity and a permission to access data would need to be obtained from each office separately in order to cover a larger geographic area.

[7] The REGON registry is a national business registration system in Poland. Its full name is equivalent to the National Business Registry and it is run by the President of the Central Statistical Office of Poland. The registry is constantly updated with new business registrations by a centralized computer system in Warsaw and regional computer systems in each of Poland's 16 provinces (voivodeships).

[8] The National Court Register (KRS), based on the Act of August 20, 1997 ("Journal of Laws" 2001, No. 17, Item 209 with amendments), is a mandatory registration system for business owners run by Poland's Ministry of Justice and selected district courts. It serves as a national database of firms involved in economic activity in Poland.

the companies studied have a much longer history. In effect, all address changes for companies established in 2001 or later are analyzed in the paper, which also analyzes address changes for firms that had registered prior to 2001. However, the 2001 cutoff date means that some address changes are omitted in the case of companies with a longer history of operation.

c) Measuring company relocation distance

GIS software[9] was used to map all address changes and calculate relocation distances.

d) Analysis of changes in the number of companies in fringe areas of major metropolitan regions

Changes in the number of companies in each studied township in the period 2002–2014 were used to supplement other data used to analyze plant relocation in fringe areas in major metropolitan regions in Poland. REGON data available on the website of the so-called Local Database managed by Poland's Central Statistical Office (Polish acronym: GUS) were used for this purpose. These data were obtained for the 2002–2014 period, as this is the only period they were available for.

Existing company relocation research on the local and regional scale

Plant relocation research has a relatively long history reaching the late 1940s. The history of this research field has been compiled in detail by Pellenbarg, Wissen, and van Dijk (2002) who provide a research timeline that begins with McLaughlin and Robock (1949) as well as Garwood (1953) and ends with fairly recent work by Louv (1996) and Pen (2000). The first papers on this subject focused on external problems such as labor costs, market size, and availability of raw materials (McLaughlin and Robock 1949; Garwood 1953).

Researchers later began to focus on key internal factors related to plant relocation (Luttrell 1962; Cameron and Clark 1966; Keeble 1968; Townroe 1972). Some work was also done on the effects of plant relocation on local and regional economies primarily in the United States and the United Kingdom. Data availability was one key factor in the research process in these two countries.

In the last twenty years, researchers have focused on so-called regional funding provided by the European Union and other large organizations and designed to be a political instrument whose purpose is to influence corporate geography. Research has also shown that sector-related issues prompt companies to relocate.

[9] GIS – Geographic Information System – computer system used to enter, store, process, and visualize spatial data.

This is true most of all in the manufacturing sector, business services sector, and sales. Firms in these sectors tend to leave core cities and establish themselves in areas characterized by less intensive land use. Research has shown that manufacturing is one of the most mobile of sectors and tends to shift to urban fringes and suburban areas (Pellenbarg, Wissen, van Dijk 2002).

Researchers have also pursued analysis of long-distance and short-distance plant relocation as well as "mobility analysis" related to plant relocation or the effects of plant relocation (van Wee 1997; Broersma, Van Dijk 2001a, b; Ekamper, van Wissen 2000). More recent research has delved into issues such as decision-making processes, push factors, pull factors, and keep factors (Louw 1996; Pen 1999, 2000).

The most recent research on local and regional plant relocation is focused on issues such as the availability of jobs and the mismatch hypothesis (Fernandez 2008) as well as regional policy in relation to plant relocation (Ulltveit-Moe 2006) and innovation strategies of business enterprises (Sharif, Huang 2012). Some researchers also focus on the characteristics of the relocation of specific types of companies including R&D firms (Erken, Gilsing 2005). Some papers also cover plant relocation in the context of the ownership structure including companies operating in the public sector (Bárcena-Ruiz, Garzón 2009). However, the majority of research papers focus on international company relocation, which is not the subject of this study.

Older publications worth noting include those on the incubator hypothesis initially described by Hoover and Vernon (1962) and further developed by Leon and Struyk (1976). This hypothesis described the relationship between company characteristics and company tendency to relocate. The following are three main assumptions behind the incubator hypothesis: (1) younger companies tend to relocate shorter distances, (2) younger companies are more likely to relocate than older companies, (3) dynamic companies are more likely to decentralize than less dynamic ones (Leon, Struyk 1976; Pellenbarg 2010).

Also worth noting are factors mentioned by Pellenbarg, Wissen, and Van Dijk (2002) who suggest that certain company characteristics may be quite relevant in the plant relocation decision process and the distance of the relocation. Their research suggests that the manufacturing sector is less likely to relocate than the service sector due to higher sunk costs[10]. On the other hand, long-distance relocation may prove too costly for service companies who are likely to lose most of their employees. Labor costs are relevant in the plant relocation process. The paper also underscores the relationship between company size and its willingness to relocate. This relationship is accurate in the case of companies with less than ten employees, but does not appear to apply to larger companies.

[10] Sunk costs are costs associated with a company's entry into a new market and may be described as barriers to entry. These include costs of permits and licenses, training costs, market research costs, costs of local agreements, and other irrecoverable costs linked with potential market exit.

Table 1. Basic plant relocation data for major metropolitan areas in Poland

Metropolitan area	Number of companies using REGON data		Number of companies based on HBI		Share of companies based on HBI data among companies by REGON data (%)		All relocated companies		External relocated companies		Share of relocated companies among all companies based on HBI (%)		Share of external relocated companies among all companies based on HBI (%)	
	10–49	50+	10–49	50+	10–49	50+	10–49	50+	10–49	50+	10–49	50+	10–49	50+
Krakow metro	1,321	255	198	131	15.0	56.0	64	47	37	42	32.3	35.9	18.7	35.9
Krakow city	4,685	1,114		892		80.1		333		86		37.3		37.3
Lodz metro	1,387	289	236	149	17.0	56.9	65	35	43	24	27.5	23.5	18.2	23.5
Poznan metro	1,953	466	553	330	28.3	12.9	197	109	139	84	35.6	33.0	25.1	33.0
Poznan city	3,925	883		754		85.4		232		63		30.8		30.8
Warsaw metro	4,515	907	1,113	606	24.7	13.7	388	176	278	137	34.9	29.0	25.0	29.0
Wroclaw metro	1,170	289	263	210	22.5	19.5	100	92	75	66	38.0	43.8	28.5	43.8
Wroclaw city	3,054	823		805		97.8		317		84		39.4		39.4

Note: In the case of central cities (Krakow, Poznan, Wroclaw), only companies with fifty or more employees were considered; in other geographic areas, companies with ten or more employees were considered in the study.

Company relocation in major metropolitan areas in Poland – scale and key characteristics

Company telephone and address information was compared with the number of companies registered in the REGON system in order to determine the level of data completeness for the studied sample. Many more companies were identified in the "50 or more" employee category than in other employment categories. In core cities, this category consisted of 52.7% of companies. The city of Wroclaw set a record with 97.8% company address availability (Table 1). Values for Poznan and Krakow also exceeded 80%. Company address availability for the fringes of major metropolitan areas was poor and did not exceed 13% for the Poznan Metropolitan Area.

Data for smaller companies – those with 10 to 49 employees – were collected by omitting core cities. The results were much less satisfactory than in the case of larger companies – mean of only 21.4%. This means that plant relocation could be analyzed and described only with respect to about one fifth of smaller companies and one half of larger companies (50 or more workers) based on REGON data.

Companies located in major metropolitan areas in Poland are quite mobile. Of the 6,240 companies studied, as many as 2,155 or one third had moved to a different site at some point in the past. More than half of the companies – 1,158 companies – that had relocated had moved to a different township.

Plant relocation patterns vary spatially in terms of the number of migrating firms as well as their share in the general population of firms. The record breaker in this sense is the Wroclaw Metropolitan Area, where as much as 43.8% of companies with fifty or more employees were found to have relocated from one township to another in the study period. The dominant pattern in inter-township relocation is that larger companies are much more likely to relocate than smaller companies. This is true in all the areas studied as part of this research effort.

This pattern holds true for all five studied major metropolitan areas, but it is the most vivid in the Krakow Metropolitan Area, where differences in plant relocation rates for companies with fifty or more employees and companies with fewer than fifty employees are significant at 17.2 percentage points. On the other hand, the most "embedded" firms are found in the Lodz Metropolitan Area, where the percentage of relocating firms (external relocations) is the smallest among the metropolitan areas studied. This statement applies to firms in both size categories – 18.2% of companies with fewer than fifty workers and 23.5% of companies with fifty or more workers.

A significant percentage of companies relocate more than once – 30% of all the studied companies found in fringe areas of major metropolitan regions in Poland had relocated more than once in the study period. Some companies relocated as many as five times or more in the study period (Figure 2). The highest

percentage of companies that relocated more than once were noted in the Wroclaw Metropolitan Area, which suggests high business mobility in the region. The opposite trend was noted in the Krakow Metropolitan Area – 80% of the companies relocating in this area have only changed their location once in the study period.

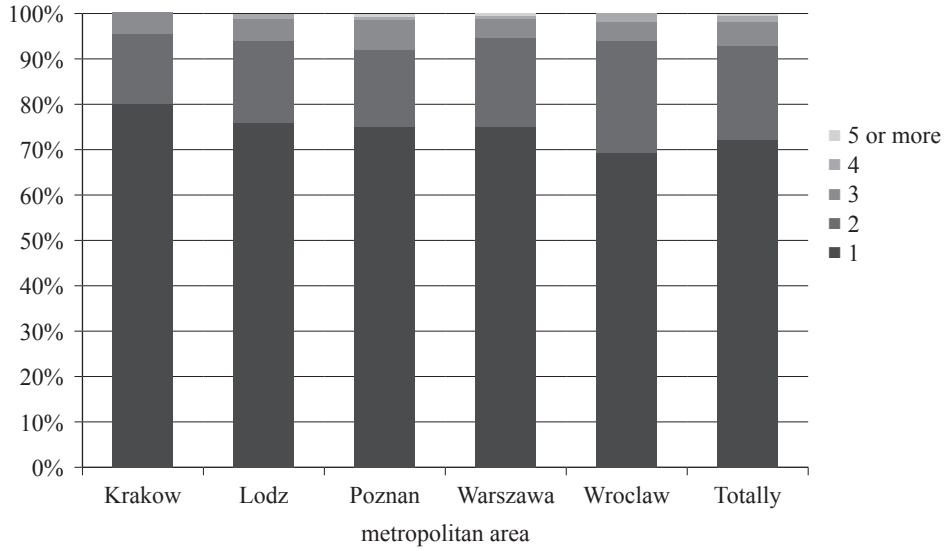


Figure 2. Percentage of companies based on their number of relocations in major metropolitan areas, analyzed without core cities

Note: relocation data for the years 2001–2013 only due to data availability issues

A company's willingness to relocate depends on the nature of its business. Table 2 shows all business sectors versus "relocating" business sectors. The largest number of relocating companies belong to Sector G (sales), which also happens to be the largest sector. Despite this rather skewed pattern, it is still possible to infer that sales organizations are still more likely to relocate (25.1% overall, 29.3% of relocating companies) than other types of business organizations. Sector C companies were also found to be quite willing to relocate (industrial processing companies).

Their share in the study area is 27.9%, but their share among relocating firms is 30.5% (Table 2). One crucial explanation for this pattern is the specific conditions needed by these types of companies in terms of physical space as well as technical infrastructure. At the same time, the trend described by Pellenbarg, Wissen, and Van Dijk (2002) does not seem to hold in our study. The hypothesis put forth in this case was that service companies have lower sunk costs, and therefore, are more likely to relocate than manufacturing companies. Our research does not confirm this.

Table 2. Business sectors in the study area versus external company relocation

PKD section	Share of firms (%)	
	firms in the study area (in general)	firms after relocation/s
A and B	1.66	1.32
C	27.90	30.50
D and E	2.03	1.14
F	10.89	9.15
G	25.14	29.30
H	4.09	5.45
I, J, K, L	11.06	8.53
M	6.19	5.10
N, O, P, Q, R, S	7.42	4.75
Total	100.00	100.00

Note: relocation data for the years 2001–2013 only due to data availability issues.

According to the dynamic version of the incubator theory developed by Leon and Struyk (1976), as companies develop, they become increasingly less dependent on "incubation areas" and are able to meet their own needs. This decreasing reliance on the incubation area is paired with a growing need for physical space, which often determines a relocation to an area with a smaller population density. According to Leon and Struyk (1976), companies need to "rest" after one or two years of business operations (since establishment). Once this rest period is over, relocation becomes an attractive option. Younger companies are more eager to relocate, which is observed in the period between five and ten years following establishment.

Our research confirms this pattern of development. This is shown by the mean number of relocations by companies depending on their age (Figure 3) and the business sectors present in the study area in relation with year of establishment and the fact of relocation or no relocation (Figure 4). Both indicators confirm that the companies most likely to relocate are those established in the years 2000–2004 or less than ten years after the year of establishment – mean of 1.42 times; more than 20% of companies established at the time have relocated. Relocation is less likely among older firms and the youngest of firms, especially those established after 2010. This trend is consistent with the incubator hypothesis, as these youngest of companies have not yet reached a level of development that would allow them to relocate profitably.

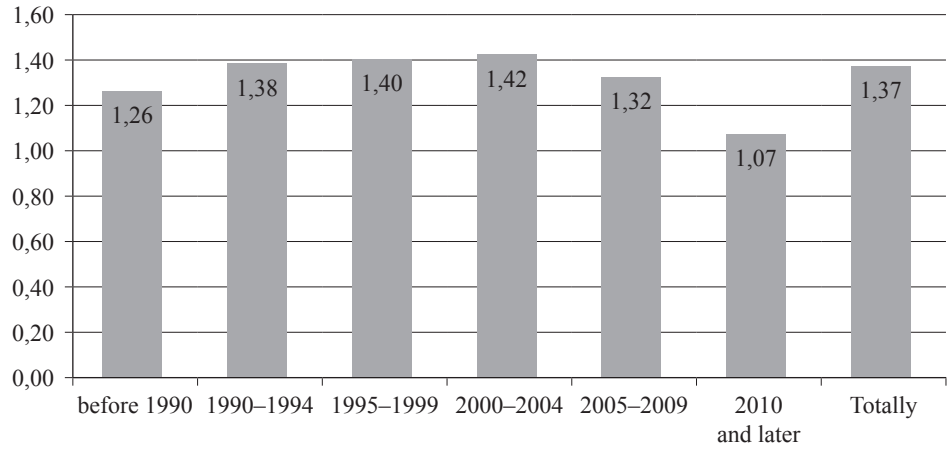


Figure 3. Mean number of relocations versus year of company establishment

Note: relocation data for the years 2001–2013 only due to data availability issues

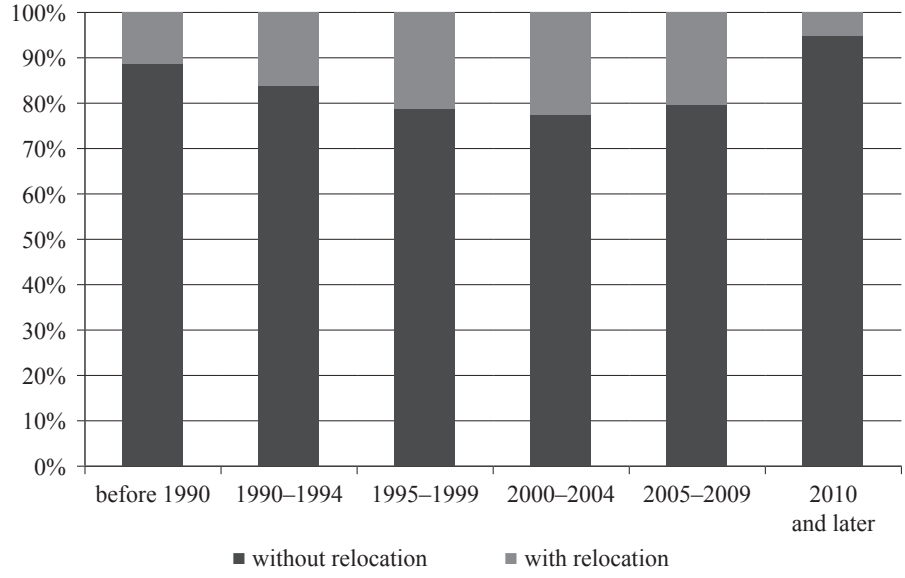


Figure 4. Business sectors by year of company establishment and external relocation

Note: relocation data for the years 2001–2013 only due to data availability issues

Another assumption behind the incubator hypothesis states that younger companies are more likely to relocate only over a short distance, which is designed to minimize risk and maintain existing business contacts despite the move to a brand new location. Familiarity with the local and regional environment is considered a valuable asset by many companies. This explanation is essentially

a behavioral analysis of company relocation based on the psychological notion that decision-makers wish to reduce risk by selecting familiar geographic regions for their economic activity (Lloyd, Dicken 1972: 157).

In order to test this assumption, the average relocation distance for every firm moving to a different township was calculated in this study. In the case of companies relocating more than once, mean relocation distance was calculated by dividing the total relocation distance by the number of relocations. Distances were calculated very accurately using GPS tools that make it possible to determine addresses with a high degree of accuracy. Next, the results were added and mean distances were calculated and placed into categories based on a company's year of establishment (Figure 5).

This is a direct contradiction of one assumption of the incubator hypothesis. Research has shown that the younger the company, the larger the relocation distance. The oldest privately-owned companies in modern Poland whose history reaches the 1980s (some even older) relocated an average distance of 36 km. The next four groups of younger companies relocated increasingly farther distances: 51 km, 57 km, 61 km, 68 km. The most surprising finding was that the youngest companies (est. 2010 or later) tended to relocate over the largest distances – an average of 146 km[11]. These can be classified as inter-regional relocations, which contradicts the general hypothesis stating that young companies seek out locations close to their site of establishment.

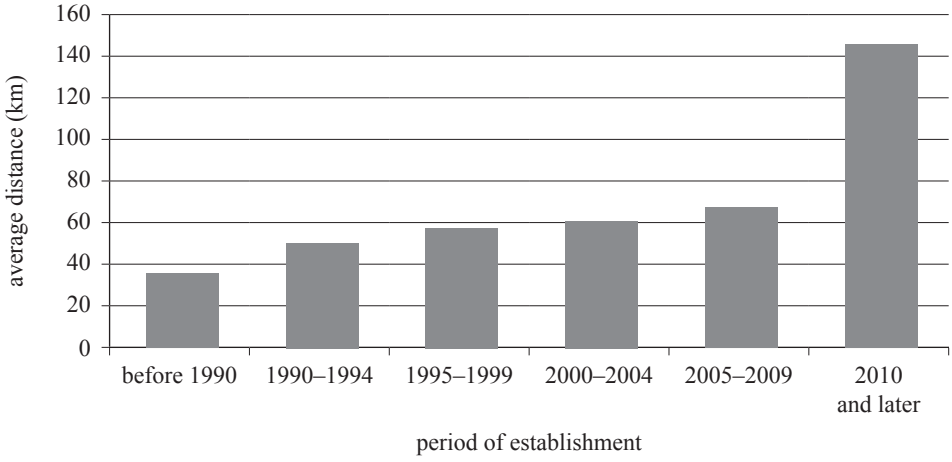


Figure 5. Mean company relocation distance versus year of company establishment

Note: relocation data for the years 2001–2013 only due to data availability issues

[11] This result does not constitute an error due to outliers. The largest relocation distance in the sample was 539 km and was associated with a company in a different age group. The standard deviations for each group shown in Figure 4 vary. The lowest value was 55.44 for the "before 1990" group. The highest value was 115.65 for the "2010 and later" group.

Relocation of companies to rural areas

Rural areas, especially those located near larger urban centers, possess certain key characteristics that attract investors. Theoretical approaches to business relocation in the context of the urban-rural continuum have touched upon various characteristics of rural areas and their ability to attract business enterprises.

Some of the relevant factors include behavioral issues (Törnqvist 1968; Lloyd, Dicken 1972: 157) that focus on familiarity with a given location as well as other issues analyzed in recent years – including the theory of flexible specialization and production and the associated "regulation theory" as well as the innovative milieu concept, network concept, and the concept of windows of locational opportunity. In addition, older theories pointing to the disadvantages of agglomeration and factors that work against agglomeration are also worth noting in this case. The latter can be described in terms of more space for investment purposes and lower land prices in areas situated away from the urban core of major metropolitan areas.

The number of companies in fringe areas of major metropolitan regions is on the rise in Poland regardless of the interpretation method adopted to analyze them. This is especially true of rural areas located in close proximity to major urban centers. The increase in the number of companies can be tracked using publicly available data.

REGON data for the 2002–2013 period show that the rate of change in the number of companies varied for different types of townships in major metropolitan areas in Poland (Figure 6). The rate of change for all five metropolitan areas was the largest in rural townships. This is especially true of businesses with fifty or more workers. The number of companies in this size category increased more than 70% in rural townships located across the Krakow and Wroclaw metropolitan areas in the study period.

A growth rate this high was not noted in any other group of townships in the study area except urban-rural townships in the Lodz Metropolitan Area. Stagnation and even decline in the number of companies were noted in large cities in the study area during the same period of time. All the studied cities except Warsaw lost companies in either one or both size categories. The city of Lodz is in the worst situation, losing about 17% of its large companies in the study period. Urban townships located in the fringe areas of major metropolitan regions experienced either stagnation or a small increase in the number of companies.

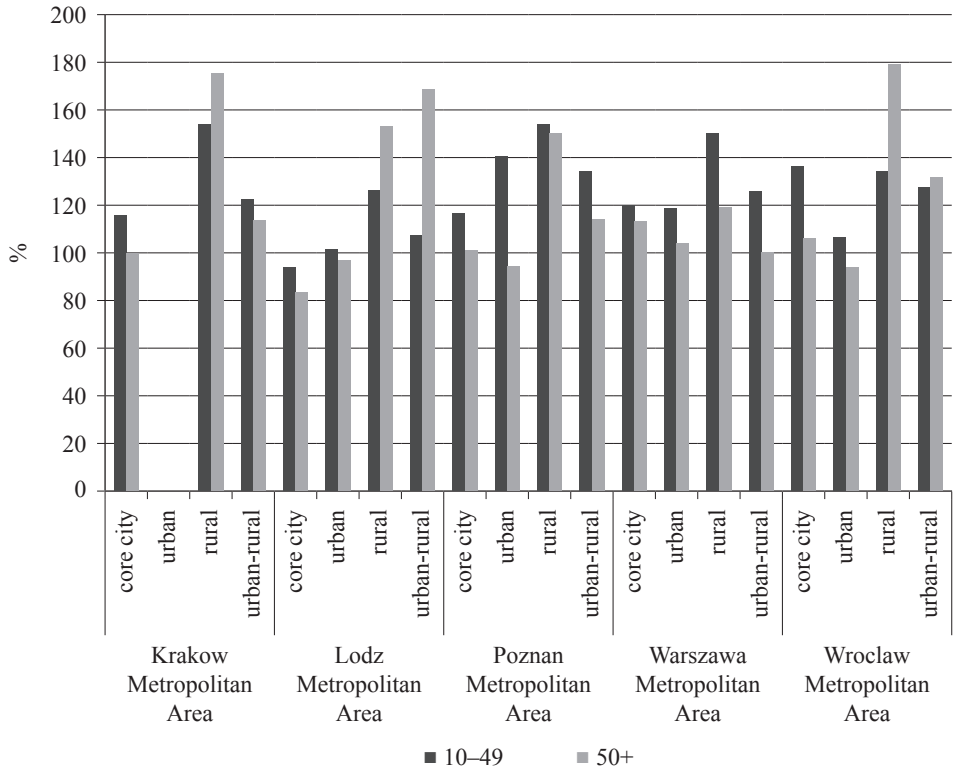


Figure 6. Rate of change in the number of companies registered in the REGON system in the period 2002–2013 in five metropolitan areas in Poland by township type

Source: author's own work based on the Local Database of the Central Statistical Office of Poland

Table 3 and Figure 6 both clearly suggest a relationship between growth in the number of companies and the relocation of companies. The highest percentage of relocated companies was identified in rural areas in major metropolitan regions in Poland. The one exception is the Poznan Metropolitan Area. In the extreme case, relocated companies constitute more than 45% of all companies doing business in the Wroclaw Metropolitan Area (Figure 7).

This tends to undermine some of the assumptions behind earlier interpretations of company relocation within the urban-rural continuum, which had suggested that companies appearing in rural areas are not the same companies disappearing from urban core areas. The old interpretation stated that the migration of companies from urban to rural areas is mostly the result of spatial differentiation in industry, local changes in industry, plant relocation, as well as differences in the way businesses are established in rural and urban areas (Grzeszczak 1998, after Healey, Ilbery 1985).

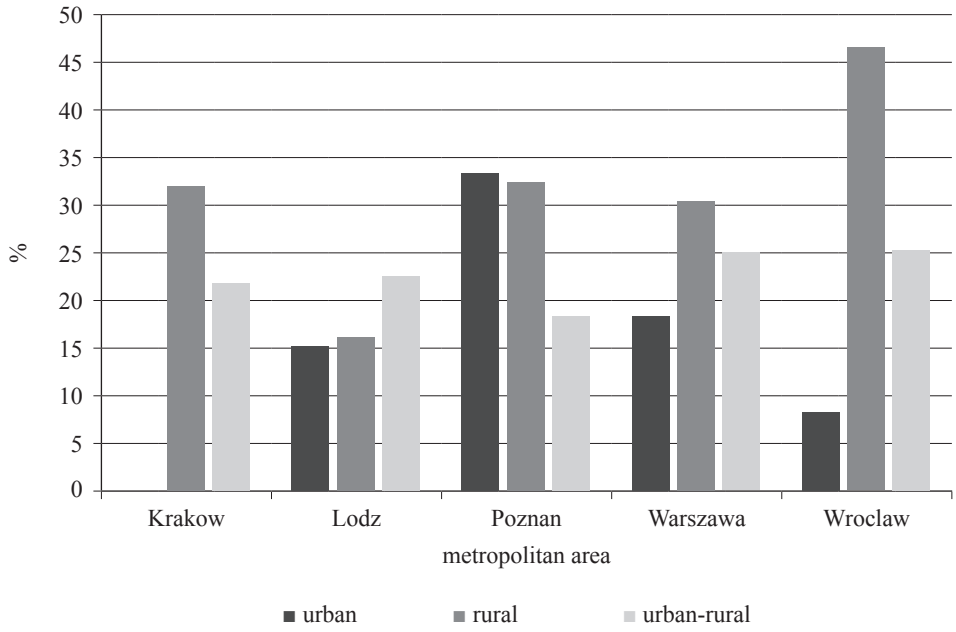


Figure 7. Share of companies relocating from one township to another in fringe areas of major metropolitan regions versus all existing local companies, by township type

Note: relocation data for the years 2001–2013 only due to data availability issues

Company relocation is traditionally not a spontaneous process, which tends to involve well-thought out decisions regarding plant site selection. Despite limits on economic information, company owners make decisions using mostly rational bases for relocation. This explains why some locations are more popular than others and distance itself tends to be of secondary importance. Figure 8 illustrates this point very well. It shows which locations within major metropolitan areas are deemed desirable by most companies wishing to relocate. An analysis of the characteristics of attractive rural townships makes it possible to evaluate local resources and their attractiveness to potential investors.

Special economic zones[12] are one local feature that makes some townships more attractive than others. In some cases, these are also called business activity zones. The Krakow suburbs of Zielonki, Liszki, and Zabierzow are examples of such zones. The city of Wroclaw also has its own suburban zones: Kobierzyce, Siechnice, Olawa. The city of Poznan also has a special suburban economic zone:

[12] Special economic zone (SEZ) – administratively distinct geographic area in a given country where business activity may occur under preferential conditions and any companies granted permission to operate in such a zone receive government assistance in the form of a tax break.

Tarnowo Podgorne. Some small towns in major metropolitan areas also offer tax breaks to potential investors: Katy Wroclawskie, Niepołomice, Konstantynow Lodzki. Features such as tax breaks, tax free periods, and technical infrastructure make special economic zones attractive to investors. As a result, more than half the companies in some townships are non-local companies. This is a reference to companies with ten or more workers.

New research has shown that the findings of Pellenbarg, Wissen, and van Dijk (2002) are quite accurate, as the business services sector is highly likely to relocate, especially to suburban areas and compact zones known as office corridors along key thoroughfares leading to cities. One example of this type of development is that of the rural township of Zabierzow located just west of Krakow.

In most townships that do not provide special incentives to investors, lower real estate prices in suburban areas represent a pull factor, as does investment land availability, good road access, and good transportation links with the urban core as well as other places important to business enterprises. Every studied area includes transportation links as an important factor, but the Warsaw Metropolitan Area is one example where this factor is extremely important. For example, four national roads intersect in Ozarow Mazowiecki Township, an urban-rural township near Warsaw. Another example is rural Raszyn Township, which lies at the intersection of national roads linking Warsaw with Krakow and Katowice.

In addition to the above key factors, company relocation is also aided by the investment climate in each given township, which evolves based on multiple factors such as macroeconomic conditions, national laws and regulations, national tax law, local economic considerations, local technical infrastructure, as well as institutional support (Investment 2004).

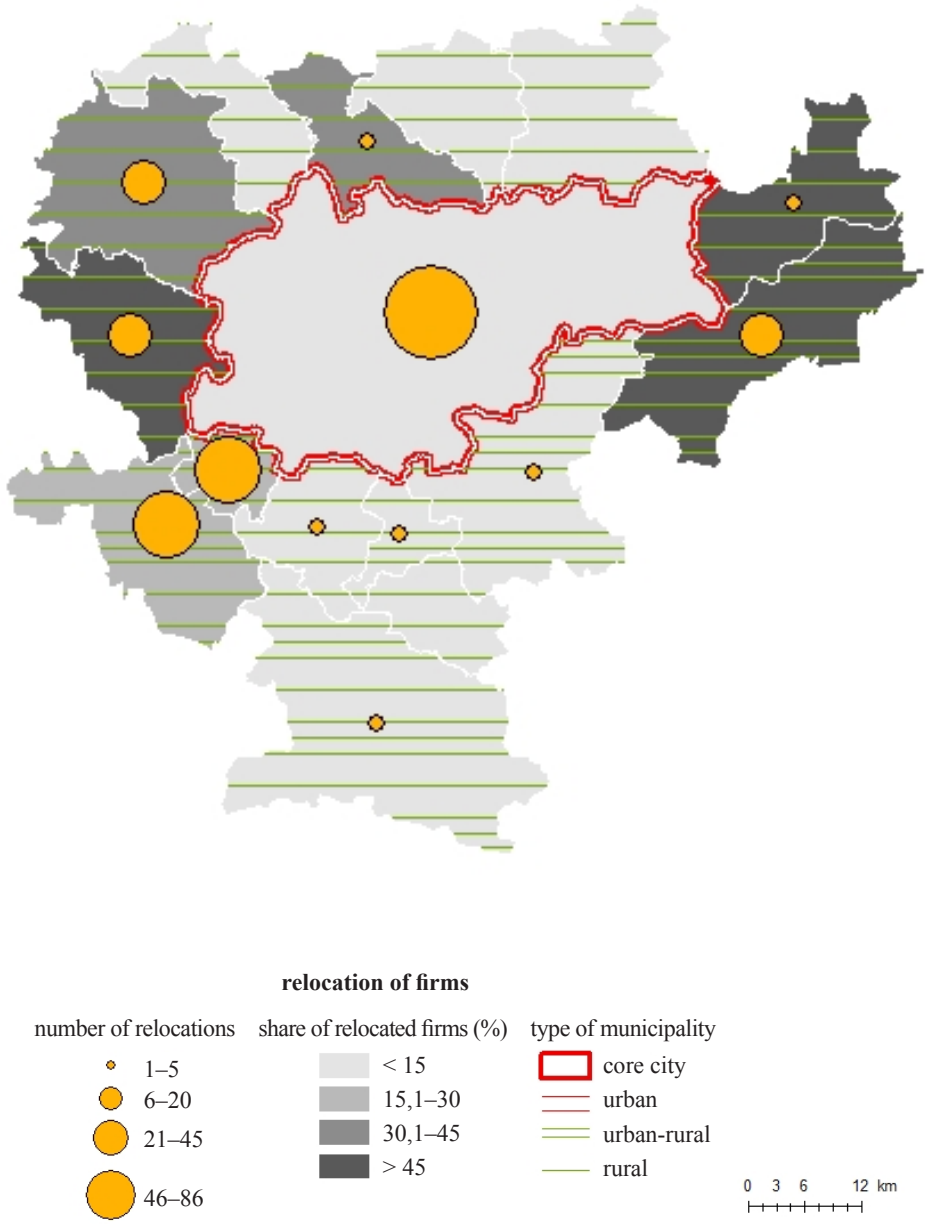
The newest publication on the investment climate in Małopolskie Voivodeship (Guzik, Gwosdz, Działek 2013) evaluates elements such as human capital, the labor market, transportation links, institutions, market potential, level of entrepreneurship, foreign investment, smaller firms that serve as direct or indirect suppliers to larger firms, residential attractiveness, the region's investment offering, and pro-investment efforts by local government officials. The publication ranked areas in the voivodeship in terms of ability to attract investors and the results were the following: (1) Krakow, (2) Skawina, (3) Zielonki, (4) Zabierzow. The latter two are suburban townships with a higher than average share of non-local companies – according to our research.

The investment climate can sometimes also make it fashionable to invest in a particular area and yields a copycat effect that reinforces existing investment areas. Yet another factor in company relocation is personal preferences – a factor that may not always be rational in nature, but can affect the decision-making process in some cases.

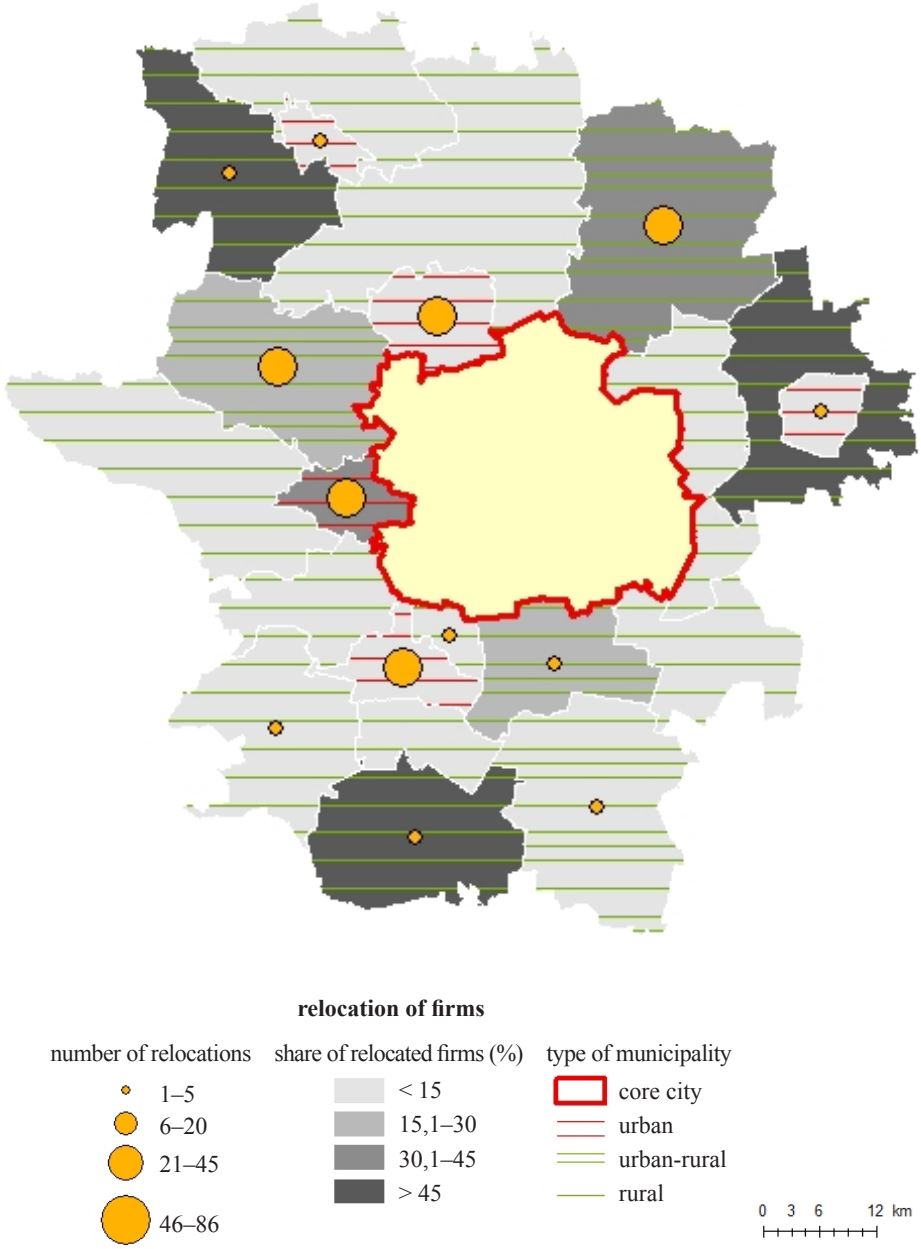
Table 3. Companies relocating from one township to another versus all companies in major metropolitan areas

Metropolitan area*	Central city of metro area			Fringe area of metropolitan area									Total		
				urban townships			urban-rural townships			rural townships					
	number of relocated companies	total number of companies	share of relocated companies (%)	number of relocated companies	total number of companies	share of relocated companies (%)	number of relocated companies	total number of companies	share of relocated companies (%)	number of relocated companies	total number of companies	share of relocated companies (%)	number of relocated companies	total number of companies	share of relocated companies (%)
Krakow external				0	0	**0**	56	257	**21.79**	23	72	**31.94**	329	79	**24.01**
Krakow city	86	892	**9.64**										892	86	**9.64**
Lodz external				33	218	**15.14**	25	111	**22.52**	9	56	**16.07**	385	67	**17.40**
Lodz city															
Poznan external				18	54	**33.33**	82	449	**18.26**	123	380	**32.37**	883	223	**25.25**
Poznan city	63	754	**8.36**										754	63	**8.36**
Warsaw external				104	569	**18.28**	175	701	**24.96**	136	448	**30.36**	1,719	415	**24.14**
Warsaw city															
Wroclaw external				7	85	**8.24**	55	218	**25.23**	79	170	**46.47**	473	141	**29.81**
Wroclaw city	84	806	**10.42**										805	84	**10.43**
Total	233	2,452	**9.50**	162	926	**17.49**	393	1,736	**22.64**	370	1,126	**32.86**	6,240	1,158	**18.56**

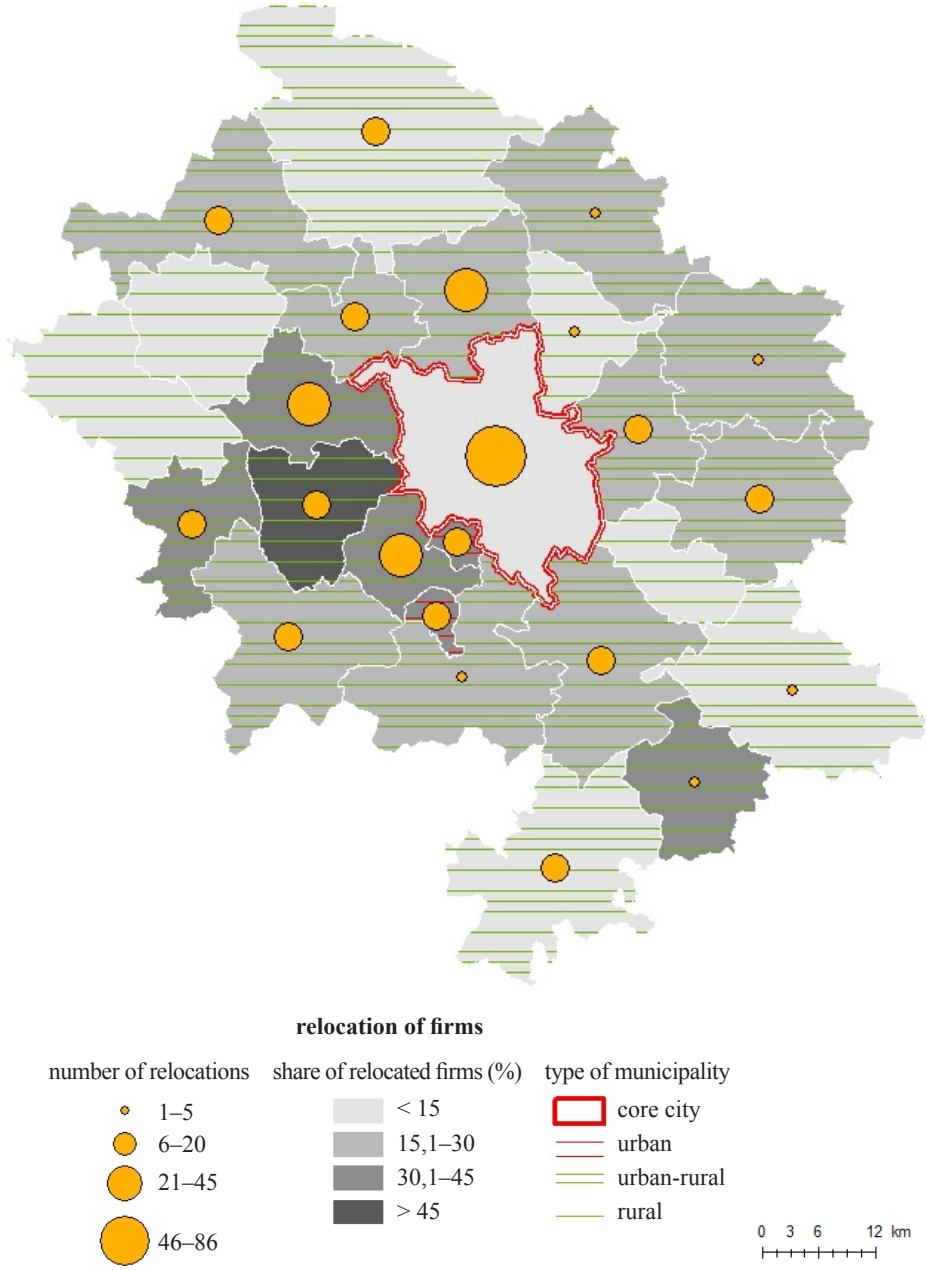
* In the case of central cities (Krakow, Poznan, Wroclaw), only companies with fifty or more employees were considered; in other geographic areas, companies with ten or more employees were considered in the study.



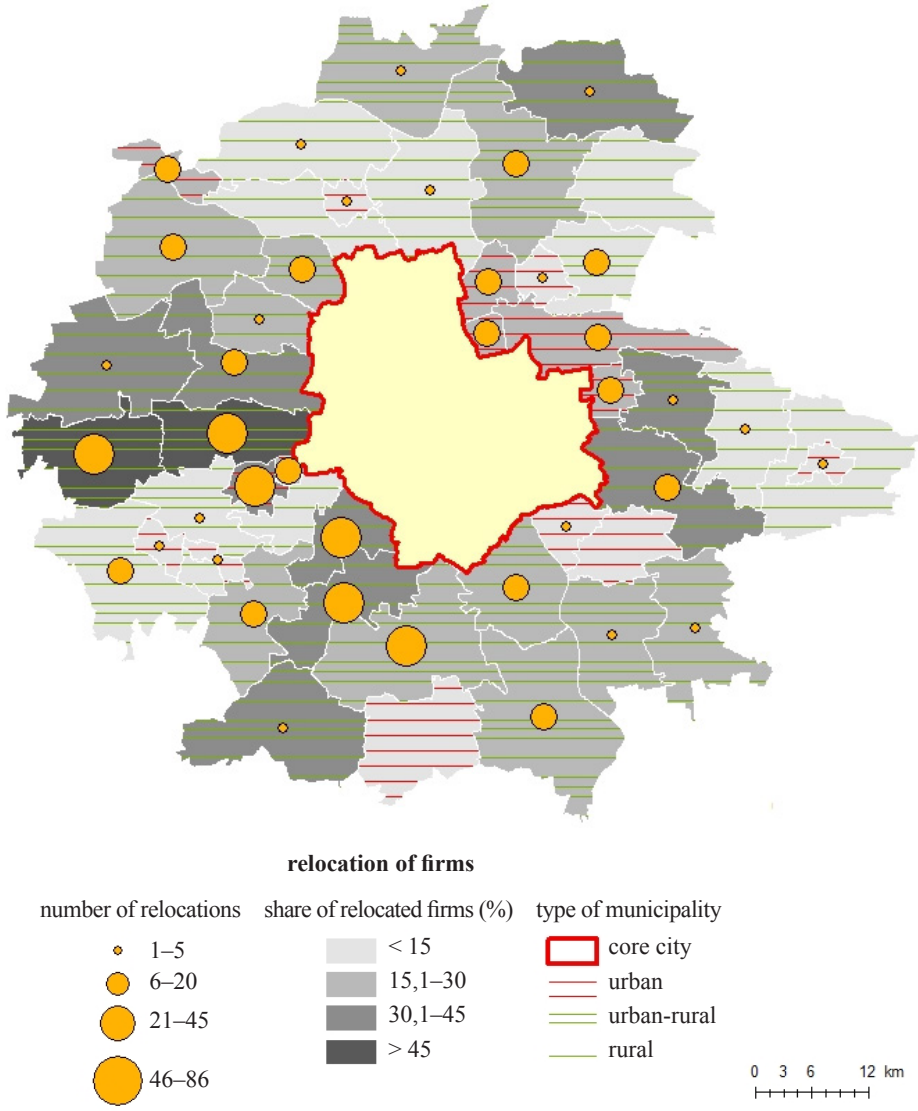
A. Krakow Metropolitan Area



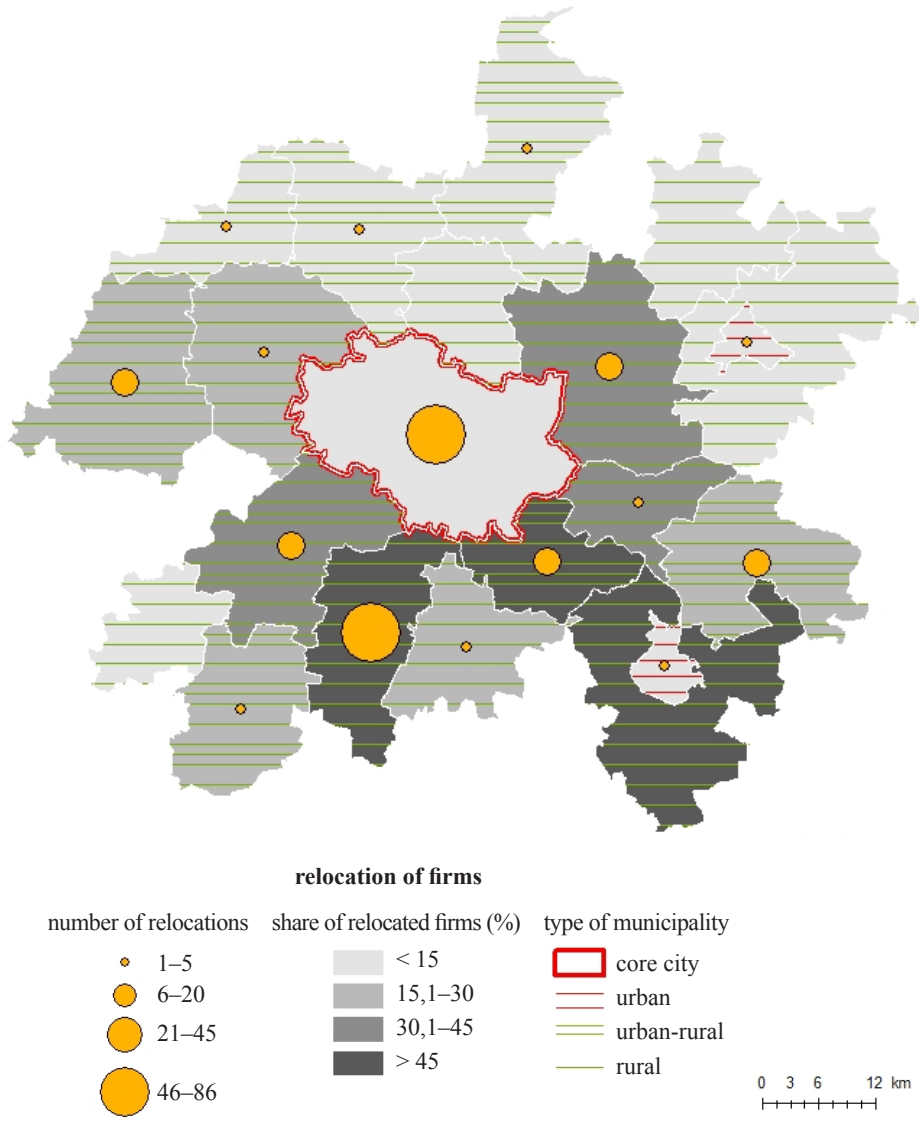
B. Lodz Metropolitan Area



C. Poznan Metropolitan Area



D. Warsaw Metropolitan Area



E. Wrocław Metropolitan Area

Figure 8. Number of relocated companies (external relocations) and their share in the total number of companies, by township type, in the following metropolitan areas:

A – Krakow, B – Poznan, C – Lodz, D – Warsaw, E – Wroclaw

Conclusions

The relocation of business enterprises on a local, regional, and national scale is rarely discussed in the Polish research literature, and marginalized in the non-Polish research literature. Most research publications focus on global business relocations and most theoretical frameworks are developed for this type of shift. Concepts that describe company relocation on the lowest level such as the incubator hypothesis of Leon and Struyk (1976) are still invoked by some researchers (Pellenbarg, Wissen, van Dijk 2002), but this is not really part of mainstream work in economic geography.

Company relocation most often occurs in or near major metropolitan areas, which serve as excellent study areas for the analysis of the scale and pace of business relocation. Rural areas located in major metropolitan areas feel pressured to attract investors and experience significant change in terms of functional infrastructure. The pressure of suburban investment may be likened to the pressure exerted by suburban residential development.

The analysis of company relocation in all key monocentric metropolitan areas in Poland suggests that this process is very intensive and its intensity varies strongly from area to area. The influx of new companies in relation to existing companies is especially strong in fringe areas of major metropolitan areas. The case of the Wroclaw Metropolitan Area illustrates this point very well – nearly half of all companies with fifty or more employees in this area are relocated companies. At the township level, this share can be even higher, reaching 100% in some cases, which means that all the companies in a given size category are relocated companies and not new companies.

Research has also shown that it is larger companies (50 or more employees) that are more likely to relocate than smaller companies, which essentially contradicts one of the ideas conveyed by Pellenbarg, Wissen, and Van Dijk (2002: 29). Their research had suggested that companies with ten or more workers are either almost equally likely to relocate or smaller companies are more likely to relocate thanks to lower relocation costs (Caves 1998).

Research has also shown that the mobility of companies varies, as measured by the number of relocations per company, and this characteristic varies spatially. Companies least likely to relocate are those found in the Krakow Metropolitan Area, where only one out of five companies have relocated more than once. On the other hand, the most mobile companies can be found in the Wroclaw Metropolitan Area, where almost one out of three companies have relocated at least twice.

Company relocation depends on the sector of the economy. Some sectors are more likely to relocate than others. This is especially true of sales organizations and the processing industry. These sectors possess the largest share of relocating firms. There are two basic reasons for this: (1) the two sectors are heavily re-

presented in the overall economy of the studied regions, (2) the two sectors are above-average in the area of company relocation due to a strong drive to relocate. Companies in the C and G economic classification categories (sales and processing) constitute 60% of all firms relocating in the study area.

The study made it possible to evaluate two assumptions behind the incubator hypothesis (Leon, Struyk 1976). The hypothesis that the tendency to relocate is linked with company age has been confirmed, with the strongest drive to relocate associated with companies several years past their date of establishment. The largest share of companies relocating to a different place in major metropolitan areas in Poland (over 20%) has been noted among companies established in the years 2000–2004. The share for both younger and older companies was markedly lower, which confirms the hypothesis that relocation decisions are made several years following company establishment when the business has achieved a certain level of stability, but at the same time needs to find the right conditions to accelerate growth.

However, our research did not confirm the second assumption behind the incubator hypothesis, which states that relocation distance is linked with company age (young companies relocate over short distances). Our research has shown that the youngest companies are relocating the largest distances and mean relocation distance declines with company age.

Research has shown that the highest rates of change in economic activity are noted in fringe areas of major metropolitan areas in Poland. This is especially true of rural townships, which have experienced a large number of business registrations in recent years. Some of these new businesses are new companies, but most are firms relocating from other parts of the metropolitan area including the urban core. Hence, urban core regions are currently experiencing stagnation, and in some cases decline, as is the case with the city of Lodz. The attractiveness of rural townships located in close proximity to major urban areas results from a combination of different factors.

Some of these factors are the same for all townships and include lower than in core cities real estate prices, higher availability of land for investment purposes, and less human impact on existing infrastructure. Some factors are specific to some townships and include special economic zones and special business zones as well as location in areas close to major highways, airports, and metropolitan ring roads.

In addition, some townships attempt to attract investors using frequently difficult to evaluate incentives such as special contacts in local government, reduced paperwork, and image-generating marketing programs. All of these "soft" incentives produce a positive investment climate in a given township. The accumulation of certain aspects of pro-investment policy in townships such as Zabierzow and Zielonki near Krakow, Tarnowo Podgorne near Poznan, as well as Kobierzyce near Wroclaw yields robust economic zones that no longer resemble the formerly rural character of each area.

Our research suggests that a company's decision to relocate is most often based on internal factors such as company size, sector of the general economy, and phase of the company lifecycle, but also external factors associated with the general business environment (e.g. push factors and pull factors linked with potential new locations). However, more qualitative research is needed in order to properly analyze motives behind the relocation of the studied companies. This new research work is already underway.

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The aim of this publication is to look at the problems of Polish rural areas from the perspective of the young generation of researchers, to show what problems they are interested in and what study methods and techniques they use to describe the phenomena occurring in Polish villages. The results of their studies were also presented to underscore the importance of these phenomena for the development of knowledge concerning the dynamic transformations in Polish rural areas. The Authors represent different fields of study (sociology, ethnography, economy and geography) from renowned academic centres such as University of Lodz, Institute of Rural and Agricultural Development, Polish Academy of Sciences (IRWiR PAN) in Warsaw, Life Science University of Poznan, Technical University in Warsaw, Institute of Urban Development in Krakow, and Maria Grzegorzewska University. What they have in common is interest in the problems of rural areas and their residents. They focus on the new model of rural development, very often identified with concepts such as multifunctional and sustainable development, on social innovation, the subject of transformations in rural residents' social roles, including rural women serving public roles, as well as on the strategies of coping with the reality used by residents of marginalized villages. The articles introduce the Readers to selected problems of development of Polish rural areas and help them to understand their complexity.

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