Migrations of city dwellers to suburban areas – the example of the city of Olsztyn

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Abstract. The migration of city dwellers to suburbs is a commonly observed phenomenon. The growth of residential areas on the fringes of cities is referred to as suburbanisation. In the present study, migration patterns were investigated in rural districts located in the direct vicinity of the administrative boundaries of Olsztyn over a 10-year timespan. Several hundred building plot purchase/sale transactions in the form of notarial deeds were analysed to determine the dwelling place of the buyer. The analysis of the transactions revealed that the dominant group of purchasers were owners of apartments in multi-family precast concrete buildings, located in the city quarter closest to the studied suburbs. Changes in the spatial structure of suburban areas were also noted.

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Contents:
1. Introduction ........................................................................... 117
2. Objective and methods ............................................................. 118
3. Suburbanisation process ....................................................... 118
4. Various aspects of urbanisation in rural areas ......................... 119
5. Research results: city-suburban migration patterns in Olsztyn ........... 120
6. Conclusions ............................................................................ 123
References ............................................................................. 124

1. Introduction

The turn of the 19th centuries witnessed unprecedented changes in global urbanisation trends. Migration from central to surrounding municipalities was observed not only in industry and services, but also in the residential sector, and it came to be known as the reverse vector process. In the initial phase of urbanisation, the majority of urban functions were concentrated within the cities’ administrative boundaries due to high demand for labour and the need to maintain contact with downtown business hubs. With the development of technical infrastructure, urban
functions became less dependent on location, and employment shifted outside central areas. This trend supported the growth of small and medium-sized residential districts in the suburbia. The process is still observed today, and it contributes to suburbanisation – the migration of city dwellers to areas on the fringes of metropolitan regions. Suburbanisation is also understood as a process of decentralisation in an urban region whose residents and businesses relocate to suburban zones.

Intensified suburbanisation leads to successive stages of the urbanisation process, namely deurb- urbanisation and urban sprawl (Majer, 2010; Lisowski, Grochowski, 2008; Szymańska, 2009). The urbanisation concept (from the Latin word *urbana* – urban, pertaining to the city) can be defined as the physical growth and expansion of cities, the spread of urban life trends into the surrounding areas, lifestyle changes, the emergence and growing popularity of attitudes and norms considered to be characteristic of urban zones (Karwińska, 2008).

Urban influences spread to rural territories, and their impact zone maps the boundaries of suburban areas. In suburban zones, the diversity and intensity of urban phenomena become weakened as we approach more peripheral locations. Suburban areas are characterised by intensive residential construction, the inflow of city dwellers, variations in the structure of land use and differences in social and economic functions. The typically ‘urban’ characteristics of suburban areas give way to more ‘rural’ features as the distance from metropolitan areas increases. The fluctuations in the populations between major urban settlements are referred to as the urban-rural continuum. This concept defines the variations in spatial forms and the processes that take place within them. In simple terms, it applies to indirect forms of settlement that take place within the processes that take place within the geographical space and social-economic conditions. This paper discusses the main trends and the magnitude of the migration process. Analytical results will enable suburban municipalities (territorial self-governments) to prepare for the influx of new residents and prevent the negative effects of suburbanisation.

The study was carried out in the following stages: (a) the spatial range of the study was defined; (b) demographic changes in local municipalities were analysed; (c) the average prices and the number of transactions in selected areas on the local real estate market were analysed; (d) the number of transactions in residential estates and selected groups of residential areas were determined based on the results of the above analyses.

### 3. Suburbanisation process

Progressing urbanisation of rural areas situated outside the cities’ administrative boundaries leads to urban sprawl and uncontrolled urbanisation of rural settlements that have convenient transportation links to the nearby metropolitan area. In the past two decades, Poland witnessed a significant increase in the migration of city dwellers to suburban areas which are considered to be more natural and healthier living environments. Economic factors play an important role in this process since suburban land and housing is cheaper than in cities. Metro dwellers search for suburban destinations with convenient commuter access to the nearby city which offers employment, academic and entertainment opportunities. Intensified migration to suburban areas increases the number of developed regions and single-family homes which are occupied solely by the incoming population. Such areas attract investors and businesses that create new economic functions in the fields of production, services and commerce. The next stage of the process involves the construction of buildings characteristic of metropolitan areas, mostly multi-storey structures. Urban planning and local authorities are responsible for defining the relationships between the new functions in rural areas at the stage of developing planning and zoning documents. City dwellers make up 61% of Poland’s population (2009 data), and their share is lower in comparison with many West European countries. The above can be attributed to intensified migration to the suburbia, and similar processes are also observed on other continents. In the United States, the percentage of population living in suburban zones increased from 23% to 45% between 1950 and 1990 (Domański, 2005). The population of rural districts situated on the outskirts of metropolitan regions increased significantly. The rate of migration to suburban areas varies according to city dwellers’ motivation and age. The migrating population can be classified into three main groups (Domański et al., 2005): (a) old-age pensioners who are not employed and do not seek work; (b) professionally active people who move to suburban areas where they work or people who search for employment in suburban regions; (c) employed and professionally active people who search for quiet suburban centres with convenient commuter services to the nearby city where they work. In most cases, they are members of a wealthy and educated social group.

City dwellers migrate to suburban areas to escape congestion and high levels of traffic in the city. Improvements in transportation structure and the motor industry encourage suburbanisation, although commuting leads to traffic congestion, mostly during rush hours, along the main transport routes to peripheral and suburban regions. Other reasons for migration include the desire to live in a friendly environment marked by scenic beauty and to own ‘private space’ with attractive living conditions. Most urban areas do not satisfy the above expectations. The city dwellers who decide to relocate have to overcome certain psychological barriers. Most of them fear change and unknown circumstances, which is why former rural inhabitants find it easier to move to a suburban district after years of living in the city.

Suburban migrants are also faced with the dilemma of whether they should settle down in new housing estates populated by people of their kind or in traditional rural communities where they have to adapt to the local lifestyle and customs. City dwellers migrating to suburban regions hardly ever break off cultural, social and economic ties with their former place of residence (Okoński, 2004).

### 4. Various aspects of urbanisation in rural areas

The process of urbanisation in rural areas (suburbanisation) is a multidimensional phenomenon which affects various areas of social life, economic performance and spatial planning (Woods, 2003; Halfacree, 2008; Lisowski, Grochowski, 2008; Halfacree, Rivera, 2011; Kabisch, Kroll, 2011; Szymańska, Biegańska, 2011; Herslund, 2012). The above changes are directly associated with the inflow of residents from a nearby urban centre. The urban scenery, land use patterns, urban lifestyle, selected urban functions, places of residence, work and entertainment are transferred to the suburbia. These changes affect the three main areas of rural life: 1. Spatial planning – the rapid increase in the number of residents and businesses in suburban areas is accompanied by dynamic and chaotic development (which leads to undesirable spatial structure) which is often deprived of rational and sustainable solutions that preserve local and cultural identity. The quality of space, landscape esthetics and spatial order (harmonious development of space) are less important considerations. Those attitudes and practices significantly impair sustainable development. Territorial self-governments have a statutory obligation to stimulate growth, preserve spatial order, control and analyse spatial management patterns and trends. 2. Economic – lower cost of living, higher living standards and lower business costs in suburban areas compensate for higher energy requirements (increased consumption of energy and fuels), higher cost of consumption (inefficient transport system, greater commuting distance to the work-place, markets, service outlets) and environmental degradation (human pressure, increased pollution, loss of farmland, disruption of ecosystems). Local population growth stimulates the economy (new investments, new jobs) and increases the revenues of suburban municipalities.
3. Social – the flow of new residents to suburban zones increases population density much above the level characteristic of rural areas. The social fabric of rural municipalities is modified to include new population groups that differ considerably from the local community. Suburban migrants have higher social and educational status, and they can contribute to the social development of urban areas. Yet in most cases, the two groups rarely develop social connections. This leads to social isolation and segregation.

The above consequences overlap, which is why they should be analysed comprehensively. They pose a serious challenge for the local authorities which are statutorily obliged to stimulate municipal growth.

5. Research results: city-suburban migration patterns in Olsztyn

The region of Warmia and Mazury is characterised by a minor decline in population, and a similar trend is observed on the national scale. In the past decades, a steady population increase has been reported in six municipalities that are directly adjacent to Olsztyn (Barczewo, Dywity, Gietrzwałd, Jonkowo, Purda, Stawiguda). Detailed data covering the period between 1996 and 2008 are presented in Table 1. The greatest changes were reported in the municipality of Dywity, Jonkowo and Stawiguda. In all analysed locations, the rate of population growth exceeded that of Olsztyn, which points to a strong trend of urban to suburban migration.

An analysis of property transaction prices (Fig. 1) revealed the trends on the analysed market. A minor increase in average property prices was noted in 2000–2005. The prices of building plots were

Table 1. Population changes in rural municipalities adjacent to Olsztyn

<table>
<thead>
<tr>
<th>Location</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region of Warmia and Mazury</td>
<td>1,456,724</td>
<td>1,427,100</td>
<td>98.0</td>
</tr>
<tr>
<td>Urban municipality of Olsztyn</td>
<td>168,711</td>
<td>176,142</td>
<td>104.4</td>
</tr>
<tr>
<td>Olsztyn district</td>
<td>112,565</td>
<td>115,822</td>
<td>102.9</td>
</tr>
<tr>
<td>Rural municipality of Barczewo</td>
<td>8,291</td>
<td>9,435</td>
<td>113.8</td>
</tr>
<tr>
<td>Rural municipality of Dywity</td>
<td>7,262</td>
<td>9,862</td>
<td>135.8</td>
</tr>
<tr>
<td>Rural municipality of Gietrzwałd</td>
<td>5,202</td>
<td>5,621</td>
<td>108.0</td>
</tr>
<tr>
<td>Rural municipality of Jonkowo</td>
<td>4,989</td>
<td>6,167</td>
<td>123.6</td>
</tr>
<tr>
<td>Rural municipality of Purda</td>
<td>7,119</td>
<td>7,604</td>
<td>106.8</td>
</tr>
<tr>
<td>Rural municipality of Stawiguda</td>
<td>4,742</td>
<td>5,743</td>
<td>121.1</td>
</tr>
</tbody>
</table>

Explanation: A – population in 1996; B – population in 2008; C – rate of population change 1996=100

Source: Central Statistical Office

Migration patterns were investigated in rural municipalities located in the direct vicinity of the administrative boundaries of Olsztyn, mostly to the south and east of the city. A total of 622 building plot purchase/sale transactions concluded in the form of notarial deeds in 2000–2011 were analysed. Property transaction data were obtained from the Centre for Geodesic and Cartographic Documentation in the Olsztyn District Office. Special emphasis was placed on 11 attractive residential and recreational locations.

Fig. 1. Average property transaction prices in 2000–2010 (PLN/m²)

Source: Authors’ compilation based on an analysis of notarial deeds

An analysis of property transaction prices (Fig. 1) revealed the trends on the analysed market. A minor increase in average property prices was noted in 2000–2005. The prices of building plots were

Fig. 2. Number of transactions in the analysed locations

Explanation: A – Sząbruk; B – Tomaszkowo; C – Dołotowo; D – Naterki; E – Maędź; F – Płuski; G – Gryźliny; H – Rentyny; I – Woryty; J – Zielonowo; K – Kręśk

Source: Authors’ compilation based on an analysis of notarial deeds

The objective of this study was to determine changes in land prices and migration patterns among the dwellers of 23 residential districts (the list of districts is given in Fig. 3).
increasing from 2006 to reach a peak in 2009 (PLN 122 per m²). A considerable drop (to PLN 81.56 per m²) was reported in 2010 due to the global crisis and the collapse of the Polish real estate market following the adoption of stringent financial policies by banks.

The buyers showed a distinct preference (Fig. 2) for building plots located in Sząbruk (168 transactions), Tomaszkowo (162 transactions), Dorotowo (130 transactions), and Naterki (68 transactions). The above locations are situated in the direct vicinity of Olsztyn's administrative boundaries, and they have excellent transport links with the city. Real estate located in Kręsk (2 transactions), Rentyny (10 transactions), Woryty (9 transactions), and Zielonowo (9 transactions) were least popular due to greater commuting distance and less convenient transport to Olsztyn.

In the following stage of the study, we analysed the number of transactions involving suburban land plots which were carried out by the residents of housing estates and groups of estates in the urban area. The main migration routes were determined based on the spatial criterion (neighboring estates) and the criterion of homogeneity of predominant housing infrastructure (Fig. 1). The highest number of transactions was noted in southern (Jaroty – 82 transactions, Pieczewo – 63 transactions, Nagórki – 50 transactions) and central (Podgrodzie – 63 transactions, Kormoran – 40 transactions, Pojezierze – 40 transactions) residential districts comprising mostly multi-family precast concrete buildings. The only exception was the Dątki estate which consists of single-family homes (53 transactions). In the latter case, migration was probably due to the planned expansion of a nearby airport, the predominance of largely dilapidated precast concrete buildings and the small area of building plots.

In the following stage of the study, the analysed housing estates were divided into six groups (ZO – Fig. 1) based on the spatial criterion (neighboring estates) and the criterion of homogeneity of predominant housing infrastructure (Fig. 1). The highest number of transactions (Fig. 4) was noted in the first group (ZO 1) of housing estates (240), followed by group ZO 2 (123). The numerical data and the spatial arrangement of housing estates in the city show that the decision to move was made primarily by residents of multi-family buildings.

The main migration routes were determined based on the analysis of the number of transactions concluded by the residents of housing estates and groups of housing estates in the urban centre and the number of transactions in suburban areas. The migration route was closely correlated with the buyers' place of residence. Dwellers of southern housing estates searched for building plots situated south of Olsztyn, which was probably dictated by their previous choice of workplace, school and other facilities. The remaining suburban areas are characterised by similar environmental conditions, but they differ from the above location as regards access to public transport and the availability of technical infrastructure.

6. Conclusions

The progressing urbanisation of rural areas situated outside the administrative boundaries of Olsztyn leads to urban sprawl that affects mainly locations with convenient transport links to the urban centre.

The prices of building plots were increasing steadily in the suburbs of Olsztyn in 2000–2009, to reach a peak in 2009. The subsequent drop observed in 2010 was due to macroeconomic factors. The global financial crisis had an impact on the real estate market in Poland (decrease in salaries, higher unemployment, limited availability of real estate loans).

The predominant group of plot buyers were owners of apartments in multi-family precast concrete buildings.

The migration route was closely correlated with the buyers' dwelling place. Residents tended to choose building land located closest to the city quarter they used to live in.

The results of this analysis will enable suburban municipalities (territorial self-governments) to prepare for the influx of new residents and to prevent the negative effects of suburbanisation.
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