

Uneven Demographic Changes as a Challenge to Provide Access to Education in the Rural Areas in Poland

Agnieszka Wojewódzka-Wiewiórska¹, Maciej Stawicki¹

Abstract

Dynamic changes in the number of inhabitants of rural areas in Poland entail necessity to adjust the market of public services and determine the way they are provided. In practice the intensity of this process varies both interregional and intra-regional. The objective of the study was to present how the uneven demographic changes including number of children affect organization of primary education by rural municipalities in selected Polish region. Research tasks were to present spatial diversity of demographic changes and number of pupils and schools and to identify and classify the ways of organization of education by rural municipalities depending on demographic processes. Research used data provided by Central Statistical Office for period 1998-2017. Moreover, data collected in own research (interviews conducted in 2018 and 2019) allowed to recognize public education services perception by local governments and rural society.

Keywords: demographic changes; public services; schools; rural society; Poland

1. Introduction

Polish population is 38.4 million people (according to data for 2017) and in recent years it decreased by 0.5% compared to 1995, while the number of rural population in the whole country slightly increased and amounts to 15.3 million people (CSO 2019). A characteristic feature of rural areas in Poland is that they are very diverse with each other, which also concerns demographic issues, including the distribution and changes in the population (Rosner 2007, Stanny & Drygas 2010, Rosner & Stanny 2014). On the one hand, there is a significant population outflow in rural areas (Bański 2008), which concerns areas with a weaker level of development, perceived as peripheral. On the other hand, there are rural areas, especially those located in the vicinity of large cities, where the population dynamically increases (Biegańska & Szymańska 2013). This is accompanied by differences at the regional and local level in terms of population growth, migration balance or population structure by age. The course of demographic processes entails a number of socio-economic consequences, both for the residents themselves and for local authorities, and significantly determines the provision of access to public services provided at the local level. An example of such services can be educational services at the primary level, to which local authorities have to ensure access by fulfilling the statutory obligation¹. The organization of the network of schools at the local level

¹In Poland there is a three-level organization of territorial self-government: municipalities (also called communes), counties (poviats) and voivodships (regions). Providing access to free education at the primary

depends on local governments and is described in detail in the Act on the education system of September 7, 1991 (Act on the Education System 1991). Currently in Poland there is a new structure of the education system introduced by the reform of 2017, which includes primary school (8 years) and secondary education (industry schools, secondary schools, technical schools). In the period analyzed in the article, there was another model of education, where the primary school covered 6 years, after which the pupils learned in a 3-year middle school (the obligation to maintain primary school and gymnasium belonged to communes). The next level was secondary education. In both models, it was the responsibility of the municipalities to provide learning opportunities also at the last year of pre-school education.

In Polish literature, issues related to the accessibility of education relate mainly to secondary education, more often situations in cities (Gil & Semczuk 2015). The main topics that can be distinguished in the research conducted so far in rural areas in education are the quality of education, barriers to education (Flaga & Wesolowska 2002, Domalewski 2011), limited spatial accessibility to schools (Guzik 2003; Czapiewski & Janc 2012) or the problem of closing rural schools (Kopeć 2013, Bajerski & Błaszczuk 2015). The latter problem in rural areas also applies to other countries in the world (Witham 1997, Kovács 2012, Taghizadeh 2019). The presented study fills the existing gap in education research in rural areas, taking into account the point of view of local authorities, which due to demographic changes, especially concerning the number of births have to change and adapt their educational offer to the real needs of the community. This is not only about the loss of pupils and the necessity to close down schools, but also about the reverse situation involving the existence of a large number of school-age children and the need to provide them with access to primary education. Considerations in this respect are very important, due to the fact that rural areas constitute 93% of Poland's area and are inhabited by about 40% of the country's population.

The objective of the study was to present how the uneven demographic changes including number of children affect organization of primary education by rural municipalities in selected Polish region. Research tasks: 1) to present spatial diversity of demographic changes and number of pupils and schools; 2) to identify and classify the ways of organization of education by rural municipalities depending on demographic processes. The concept of accessibility to education is to ensure that pupils meet educational needs in the municipality, which is the responsibility of the municipality authorities resulting from the division of tasks between individual levels of local government.

2. Methodology

As rural areas rural communes and urban-rural communes were adopted, as defined by the Central Statistical Office in Poland, which results from the availability of statistical data. The time range covers the years 1998-2017. The source of statistical data

level is the responsibility of the commune/municipality (the lowest level of local self-government). The next level of units (poviats) are to provide access to post-primary education.

was the Central Statistical Office (CSO 2019) and own research carried out in 2018 and 2019 in selected communes of the Mazowieckie Voivodship (Mazovia). Mass statistics data included the following indicators: natural increase per 1000 population, number of children aged 7-12, the total number of primary schools were intended to show demographic changes and potential pupils as well as the number of primary schools in at the regional and local level in Poland. Next, the situation in the Mazowieckie Voivodship was presented, which was selected due to the very large internal diversity at the level of municipalities regarding demographic changes and changes in the number of schools identified in the analyzed period. Depending on the identified demographic situation (dynamics of number of children aged 7-12) and changes in the number of primary schools, the municipalities of the studied region were divided into types (Table 1). The number in brackets means the share of the municipalities in the group in the region. Stabilization means changes in the range $\pm 10\%$ in the whole analyzed period.

Table 1. Type and structure of Mazowieckie region municipalities depending on changes children and primary schools in 1998-2017. Source: own elaboration

Specification		Number of children aged 7-12		
		decrease	stabilization	increase
Number of primary schools	decrease	A (69%)	B (4%)	C (2%)
	stabilization	D (14%)	E (3%)	F (2%)
	increase	G (1%)	H (1%)	I (4%)

For in-depth analysis the groups with extreme values of analyzed indicators (A and I) were chosen in order to identify and present the ways of the communes dealing with unequal demographic changes. The authors selected the municipalities where demographic changes and changes in the number of schools in 1998-2017 were the largest. Own research was conducted using telephone interviews and individual interviews (16 interviews) with employees of municipal offices dealing with the organization of primary education in 13 communes evenly distributed in two analyzed groups (5 in each of groups A and I). This allowed to learn about the determinants of education organization at the primary level depending on the existing demographic situation. 3 interviews among groups B and C allowed to compare the situation and draw additional conclusions.

3. Demographic Changes in Polish Regions

The number of primary school students is a consequence of the birth rate and migrations. In recent years, in Poland, the natural increase was negative and in 2017 fluctuated around 0 per 1000 population, which varied between regions. The situation was more favorable in the countryside than in the city (in 2017 the indicator in the rural areas was 0.7 and in the city - 0.5 per 1000 population).

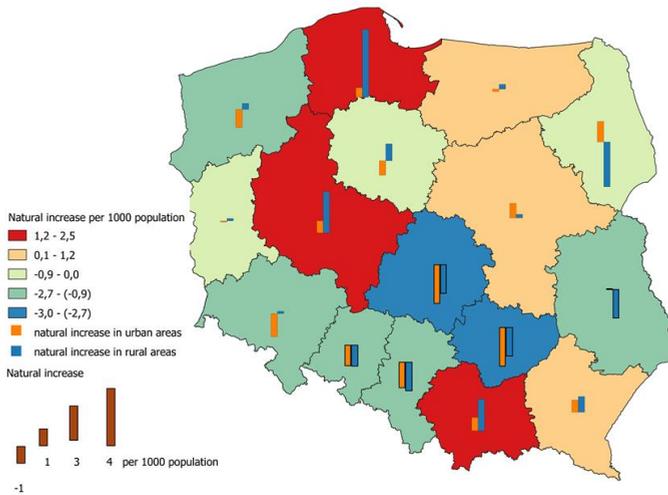


Figure 1. Natural increase per 1000 population in regions in Poland in 2017. Source: own elaboration based on CSO data

In regions: Wielkopolskie, Malopolskie and Pomorskie (fig. 1), the natural increase in rural areas was high (3.5-5 %) and was significantly higher than in urban areas. Mazowieckie and Podkarpackie voivodships are characterized by a positive growth both in cities and in the countryside. In the eastern regions and some central and southern regions there is a natural loss in all types of areas. Migrations cause mainly the increase of number of inhabitants and children in suburban zones of main metropolises (Warsaw, Poznan, Wroclaw) and medium-size cities and the outflow of young people is typical for Central and Eastern rural areas.

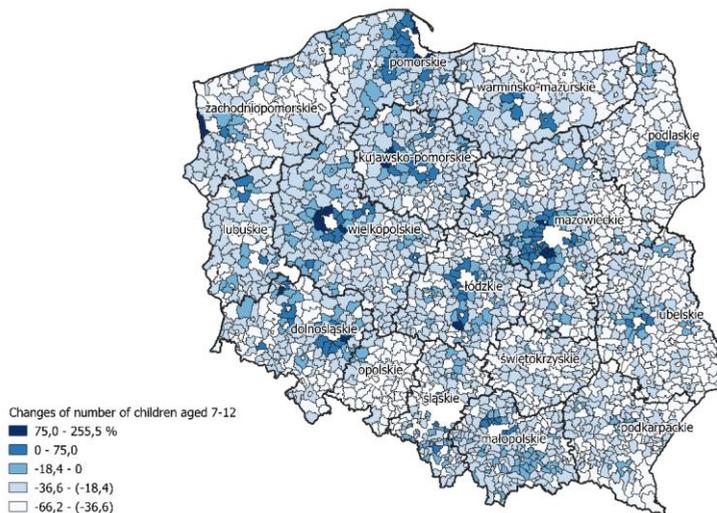


Figure 2. Changes of the number of children aged 7-12 in rural and urban-rural municipalities in Poland in 1998-2017. Source: own elaboration based on CSO data

As a consequence of natural increase and migrations, the number of children aged 7-12 changed in the analyzed period significantly (fig. 2). On one hand, in the vicinity of main cities the number increased even twice, on the contrary, in many rural areas in Central and Eastern Poland the number decreased by 35-65%. These changes strongly affected the municipalities' policy and actions in the field of providing access to education at the primary level. The differences in actions taken by the municipalities are presented in fig. 3.

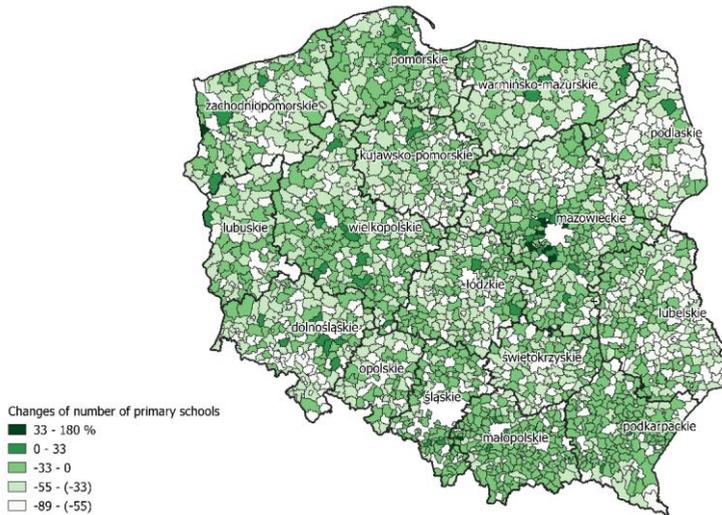


Figure 3. Changes of the number of primary schools in rural and urban-rural municipalities in Poland in 1998-2017. Source: own elaboration based on CSO data

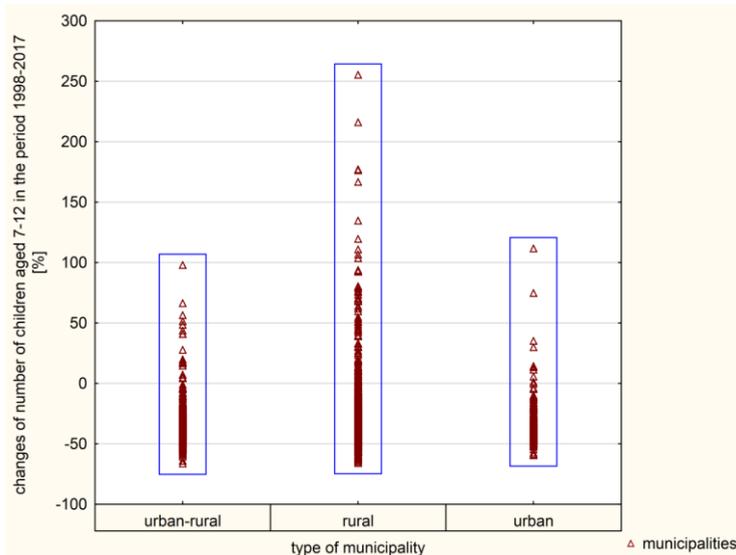


Figure 4. Changes of the number of children aged 7-12 depending on type of municipality in Poland in 1998-2017. Source: own elaboration based on CSO data

In most communes in Poland, regardless of the type, there was a decrease in the number of children aged 7-12 in 1998-2017 (fig. 4). Among various types, rural communes were characterized by the greatest diversity in terms of changes in the number of school-age children. This was caused by the fact that most of them are typically rural, peripheral areas with prevailing agricultural function which loose inhabitants and on the other hand, some are located in the vicinity of big cities and as a consequence, attracting new residents. Urban and urban-rural communes were similar to each other in this respect, here the maximum increase of number of children was smaller and amounted around 100%.

4. Demographic Changes and Organization of Primary Education in the Mazowieckie Region

The Mazowieckie Voivodship is a region located in central Poland, within which the capital of Poland - Warsaw is located. This region is characterized by a very large variation in the number of children aged 7-12 at the local level. In the years 1998-2017, changes in the number of school-aged children in the range from 61% to 216% were recorded in the communes of the region. The large diversity of the municipalities of the selected region in terms of demographic changes (fig. 5) has enabled the presentation of different ways of proceeding of the commune authorities in providing access to education at the primary level.

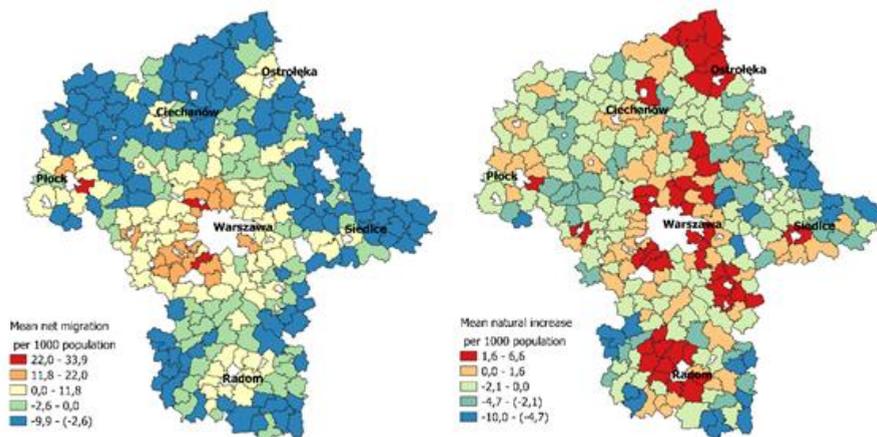


Figure 5. Demographic changes in rural and urban-rural municipalities in Mazowieckie region (average annual rates from 2003-2017). Source: own elaboration based on CSO data

Demographic changes in rural and urban-rural municipalities in Mazowieckie region indicate correlation between natural increase and net migration rate. The highest inflow of inhabitants was observed in the suburban zones of Warsaw and Płock – two highly developed cities of the region. Northern, eastern and southern peripheries were facing emigration. Natural increase was lower than net migration and, similarly to migrations, was highest around all big cities in the region. These changes obviously affected the number of school-aged children, which was a new challenge for local authorities.

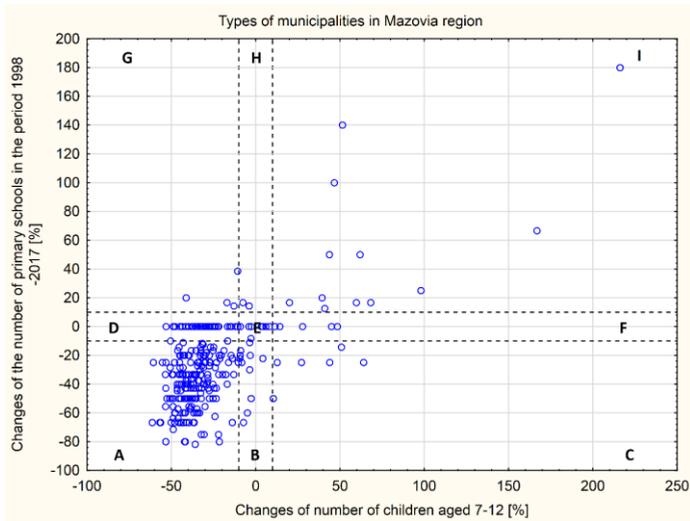


Figure 6. Dispersion of types of rural and urban-rural municipalities in Mazowieckie region.
Source: own elaboration based on CSO data

In Mazowieckie voivodship (fig. 6), communes characterized by a decrease in the number of children (84% of communes) dominate, which is most often accompanied by a decrease in the number of schools (group A). Municipalities of this group are located mainly in peripheral northern, eastern and southern areas of the region (fig. 7). In 14% of municipalities, mainly in the central part of the region although not directly neighbouring big cities, the number of children decreased but no changes in the number of schools were made, so relatively, the school accessibility has improved. Only in the suburban zone of Warsaw the group I was observed.

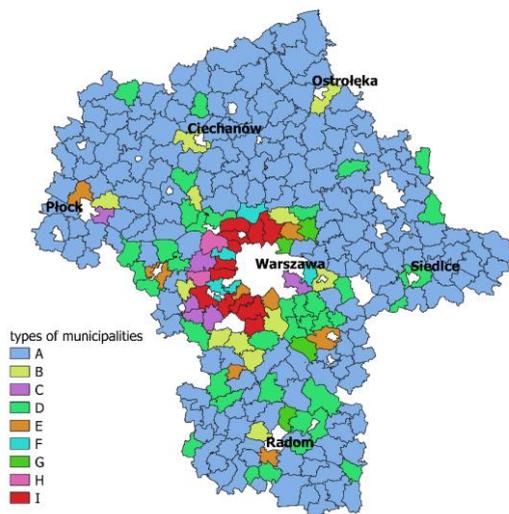


Figure 7. Types of rural and urban-rural municipalities in the Mazowieckie region depending on changes of children and primary schools in 1998-2017
Source: own elaboration

5. Primary Education in Rural Areas – Case Studies on Local Level

In Mazowieckie voivodship, due to the different shaping of demographic processes in individual parts of the region, local authorities pursuing the goal of ensuring the best living conditions for rural residents carry out various activities aimed at providing access to primary education. The key issue is the preparation of municipalities for the adoption of a large number of school-age children, which takes place in rural areas characterized by an increase in population, mainly in the vicinity of cities. Another important issue is the organization of primary education in a situation of a large decrease in the number of children and the necessity to close schools. Both issues are a big challenge for local governments. In-depth studies examined in detail the activities of communes in the organization of primary education in two groups of municipalities. The first group was type I, in which the increase in the number of children aged 7-12 (from 50 to 216% in 1998-2017) was accompanied by an increase in the number of schools. The other analysed group were the municipalities where there was a decline number of children, which entailed the necessity to close down schools (the number of schools in the analysed period decreased by 64-82%) - municipalities of type A. In-depth studies showed that the process of school closing determined on the basis of mass statistics was not really so intense, because it often included closing of affiliate schools.

Table 2. Conditions of access to primary education in the analyzed municipalities of the Mazowieckie region in Poland. Source: own elaboration

Specification	Type I: (increase in the number of children and schools)	Type A: (decrease in the number of children and schools)
valuation number of children	<ul style="list-style-type: none"> • data of the Civil Registry Office, based on the number of children in kindergartens (optional education, a large number of non-public kindergartens) and information from real-estate developers • very difficult issue, failure to comply with the obligation to register, information reported by parents (sometimes just at the beginning of school year) 	<ul style="list-style-type: none"> • data of the Civil Registry Office, based on the number of children in kindergartens • there are some minor differences
housing issues	<ul style="list-style-type: none"> • construction of new schools (in places where the population is growing), expansion of existing schools • lease of buildings • necessity to plan some classes in the afternoon 	<ul style="list-style-type: none"> • closure of schools with the smallest number of pupils (often in small villages), these are low-standard buildings • buildings are being sold or after repairs used by local communities as day rooms, libraries, etc.
main problems	<ul style="list-style-type: none"> • estimating number of children • demanding attitude and high requirements of parents • problems with staff (teachers changing profession due to low earnings in education in Poland) • applications for admission of children from outside the municipality 	<ul style="list-style-type: none"> • conducting the school closure process (good preparation of local communities) • commuting children to schools (high financial burden) • providing jobs to teachers working in closed schools
ways of dealing with the existing situation	<ul style="list-style-type: none"> • necessity to plan some classes in the afternoon • developing market of non-public education • using external (EU) funds to invest in educational infrastructure (expansion, purchase of equipment) 	<ul style="list-style-type: none"> • closing of branches of schools (often on the occasion of reforms in education) • taking measures to ensure access to education for children with disabilities (from the commune and offer for other municipalities)

In both types of municipalities (Table 2) there was a problem with estimating the

number of children who will start learning in the first class, which results from the frequent non-compliance with the obligation of registration in Poland. This problem was definitely more visible and burdensome in municipalities characterized by a dynamic increase in the number of children, where despite a well-planned recruitment procedure just before the school year it appeared that the number of children far exceeds the estimates (eg. a month before schooling there was a shortage of places for 60 children, two classes). In the analysed communes, the key issues are ensuring and maintaining a suitable schooling base. In communes where there is an increase in the number of children, non-public education also develops, which offers a very wide range of additional classes and thus meets the parents' very high requirements in this regard.

6. Conclusions

1. Changes in the number of school-age children identified in Poland reflect the situation regarding the decline in the total population and the aging population, which is regionally highly differentiated. In Mazowieckie voivodship, communes characterized by a decrease in the number of children (84% of communes) dominate, which is most often accompanied by a decrease in the number of schools. On the other hand, some municipalities located in suburban zones are facing an intensive increase of inhabitants, both as a consequence of migrations and natural increase.
2. It was found that both a large increase and a decrease in the number of school-age children pose a major challenge for local governments in the organization of primary education (financial issues), which may also affect the quality of teaching.
3. It is optimistic that basic education in all analysed municipalities of any type, despite the fact that it is a heavy burden on the local budget, is a priority in the actions of local authorities and is an "investment in the future", which may indicate a high awareness of the role of education in local development.
4. Municipalities, using their previous experience in their activities, adapt the educational offer to the real needs of the community. The biggest problem is a proper estimation of the number of potential students and the related need to ensure access to primary education for new residents in a short time (not included in statistical data). This is particularly true for suburban municipalities, where the population is growing dynamically.

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