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## Inter-Municipal Cooperation in Education as a Possible Remedy for Current Difficulties of Local Government in Poland

**Abstract:** The purpose of this article is to fill the existing gap and contribute to the literature in two ways: firstly, by investigating problems that caused the emergence of cooperation between two municipalities despite the administrative border at the county level, and secondly, by analysing the effects of joint provision of public education based on a case study from Poland. The case study is preceded by the use of the literature review method. The problem of possible enhancement of inter-municipal cooperation (IMC) in Poland is proposed as a potential remedy for current difficulties that Polish local governments face after the reform of the education system and the COVID-19 pandemic, as well as due to demographic decline and budgetary challenges. Studies suggest that net benefits of cooperating are higher if IMC partners are smaller and more homogenous with respect to the quality and level of public services. The theory of exploiting economies of scale and scope was studied based on the case study of a Polish inter-municipal union created only to provide education in two municipalities. The cooperation resulted in little positive financial effects reflected in the lower spending per pupil only in the case of primary school. However, the union caused nonfinancial benefits not only for pupils but also for parents and teachers, who are voters as well. The article concludes that inter-municipal unions could be used especially by small and rural municipalities that struggle with the previously mentioned problems.

**Keywords:** inter-municipal cooperation, education system, reform, Poland, COVID-19

**JEL:** H70, H75, H77, H79

## 1. Introduction

After the economic transformation, which took place in the 1990s, there are three basic layers of local government in Poland entitled to provide public goods and services: municipalities, counties and voivodeships. At the same time, the decentralisation of public tasks from the central level to local governments occurred. Many of those tasks were assigned to municipalities that constitute a basic tier of local government according to the Constitution of the Republic of Poland (Konstytucja Rzeczypospolitej Polskiej z dnia 2 kwietnia 1997, art. 164). These tasks concern, among others, public education, healthcare, waste management, water and sewage management, road infrastructure, local transportation, culture and environmental protection (Ustawa z dnia 8 marca 1990 r. o samorządzie gminnym, art. 7).

Transferring public tasks to municipalities and setting most of them as mandatory ones required providing these units with public funds from the central budget in the form of conditional and unconditional grants. However, these funds are insufficient and municipalities use their power of partial economic self-reliance to obtain money from their own resources such as local taxes and charges as well as shares in revenues from the personal and corporate income tax (Ustawa z dnia 13 listopada 2003 r. o dochodach jednostek samorządu terytorialnego, art. 3–4).

The lack of sufficient funds for educational tasks has been observed for many years. It is a problem concerning especially small and rural municipalities that struggle with demographic decline to a greater extent than urban municipalities. In Poland, it has been enhanced recently by the reform of the education system and the COVID–19 pandemic. Moreover, both international (e.g. Blaeschke, 2014) and national (e.g. Swianiewicz et al., 2016) studies on fiscal federalism point out that administrative borders between municipalities are not necessarily in accordance with efficient provision of public services. One of the possible solutions is to deliver public services jointly which can help to keep raising costs down, hence increase efficiency of public spending and also the quality of public services. However, it is uncommon for municipalities to cooperate with local governments from other counties – cooperation is limited to one county, which suggests that administrative borders affect it (Fuhrmann et al., 2005). Besides, inter-municipal cooperation is not a popular way to provide public education by local governments in Europe. In most cases, it serves as a platform to deal with waste, water or sewage management (e.g. Bel, Warner, 2015), which can be described as capital-intensive tasks, whereas labour-intensive tasks are less often undertaken jointly, and thus are less analysed in the literature (Bischoff, Wolfschütz, 2017). The purpose of this article is to fill the existing gap and contribute to the literature in two ways: firstly, by investigating problems that caused the emergence of cooperation between two municipalities despite the administrative border at the county level, and secondly, by analysing the effects of joint provision of public education based on a case study

from Poland – the Gostkowo-Niepart Educational Inter-Municipal Union. Hence, the paper answers the following questions: what kind of challenges in general do local government face nowadays? What are the possible ways to approach them? What are the positive and negative sides of delivering educational tasks jointly? Which factors triggered the cooperation in public education in the analysed municipalities? What kind of effects did this cooperation bring to local governments and also to local inhabitants comprising parents and teachers, who are also voters? In order to answer the above-indicated questions and achieve the aim of the paper, it is organised as follows. First a brief literature review on IMC as a remedy for the enumerated problems of local government is conducted. Then, the legal framework for inter-municipal cooperation (IMC) in Poland is developed. The next section discusses the changes of the education system after the new reform in 2017. Inter-municipal cooperation in the field of education in Poland is explained in Section 5. One of the most important parts of the paper (Section 6) is the first analysis – to the best of author’s knowledge – of the only one inter-municipal union that was established in Poland to jointly provide education. Section 6 contains the results and discussion, and Section 7 concludes the presented considerations.

## 2. Methods and data

The methods used in this article are based on the national and international literature review, the legal analysis of inter-municipal cooperation in Poland which is followed by the study of changes in local governments due to the reforms of the education system in Poland, and the analysis of inter-municipal cooperation in the field of education in Poland. All these analyses create a foundation for the case study of the Gostkowo-Niepart Educational Inter-Municipal Union. The reason for selecting this particular union stems from two facts: firstly, as it will be discussed further in detail, it is the only inter-municipal union that was created solely for the purpose of providing educational services, and secondly, two municipalities being partners of the union are members of two different counties. This extraordinary case allows us to analyse and understand what kind of factors could drive them to cooperate, despite their regional differences. The case study was conducted on the basis of legal acts (national ones and very detailed local acts) as well as financial, social and educational data of two municipalities and the union itself. The analysis based on those data was compared to the analogous average results of particular types of municipalities in Poland. The data were extracted from the Central Statistical Office Local Data Bank, detailed local governments’ and inter-municipal unions’ budgetary statements and from the official register of IMC-unions run by the Ministry of the Interior and Administration presented on the basis of their official statutes.

### 3. The Literature Review on IMC

Empirical studies on fiscal federalism point out that administrative borders between municipalities are not necessarily in accordance with efficient provision of public services (e.g. Blaeschke, 2014). The pressure of efficient public spending as well as the emphasis placed on the quality of public goods and services have increased in the last decades in many European countries. On the one hand, local government faces budget challenges, must adhere to the EU fiscal discipline and fulfil public finance requirements of the central government that should increase its efficiency<sup>1</sup> (Bel, Warner, 2015). On the other hand, societies are more conscious and care about the quality and amount of public goods and services they pay for through taxes and fees. It is especially a challenge for small and rural municipalities that are obliged to perform certain tasks experiencing at the same time the pressure to reduce their expenditures (Ferraresi, Migali, Rizzo, 2017: 2). The problem is even more enhanced by the consequences of a decline in population (Bergholz, Bischoff, 2015: 1).

One way to solve the enumerated issues and deal with the problem of the optimum scale of production is to achieve economies of scale and scope with low transaction costs through inter-municipal cooperation (Adelaja, Gibson, Racevskis, 2010; Bel, Fageda, Mur, 2011: 6; Allers, de Greef, 2017). Inter-municipal cooperation is a form of horizontal voluntary cooperation between local governments. They join their forces to perform obligatory and facultative tasks in order to provide local communities with public services and goods. This kind of cooperation can help to reduce inefficiencies without limiting political autonomy of municipalities (Blaeschke, 2014: 3–4).

The cooperation is restricted to certain activities and there are no boundaries for municipalities to cooperate within many different IMC depending on their aim. It also means that provision of a specific service or good does not affect tasks performed individually by IMC municipalities that are not subject to cooperation (Bergholz, Bischoff, 2015: 4).

Municipal authorities that face fiscal<sup>2</sup>, demographic and qualitative challenges of providing citizens with public goods and services should calculate costs and benefits of the cooperation via IMC. Studies indicate that the more homogenous populations in cooperating municipalities are, the higher the net benefits derived from cooperation. The size of the municipality also matters – the smaller it is, the more benefits of the economies of scale and scope can be achieved from IMC. However, joint provision of public goods and services means a partial loss of the

1 Municipal demand for IMC was studied by e.g. Bischoff, Wolfschütz (2017).

2 The increase in IMCs in Europe can be observed especially after the introduction of austerity fiscal policies (stricter rules of borrowing and deficits). It particularly applies to Iceland, Italy, the Netherlands, Portugal, and the UK (Swianiewicz, Teles, 2018: 31–32).

ability to adjust them to the needs of citizens in a particular municipality (Bergholz, Bischoff, 2015: 4–5).

The literature provides studies on the effects of IMC on different kinds of tasks performed by municipalities.<sup>3</sup> Most researchers focus on capital-intensive fields, whereas cooperation in public education has received little attention. IMC is not a popular form of providing public education by local government in Europe, despite its advantages. In Norway only up to 5% of local governments have decided to use IMC to provide citizens with kindergartens and primary schools. In Spain, up to 8% of inter-municipal associations provide education. In Finland and Iceland, IMC is used only in vocational education (Swianiewicz, Teles, 2018: 120–121). In Croatia, some efforts have been made in order to jointly run kindergartens. 8.6% (32) of IMC has been aimed at providing care for children (Podolnjak et al., 2010: 41, 54).

However, there are examples of positive effects of IMC implementation for education and upbringing. One of them comes from the Czech Republic, which also faced the problem of demographic decline. In 2005, the central government allowed local governments to form cooperation in order to run micro-regional schools, but only three unions were established. Most local governments decided to use less integrated approaches. However, choosing IMC in the case of three municipalities proved to be an effective solution. Running jointly three grammar schools, three kindergartens and two kitchens brought advantages to all three municipalities. First of all, municipalities of that IMC are not competitors and do not tailor their services just in order to attract more pupils. They cooperate to create more specific classes to meet students' actual needs. As a result of cooperation, municipalities exploited the economies of scale and lowered their expenditures (operational costs especially). Moreover, IMC allowed them to increase local governments' capacity to obtain lower energy prices on the market than individual municipalities did before. The IMC also owns a common bus that is used not only for the purposes of students' transportation but also for local communities (Swianiewicz, Teles, 2018: 320–321).

The reason why local government do not often choose IMC to provide public education was explained by some authors on the basis of their research. Swianiewicz and Teles (2018: 121, 124) indicate that education is a core service for local governments and it is hard to organise welfare services and goods via IMC. It is presented more clearly by other authors who argue that large school districts (or joint provision of education by IMC) can reach the economies of scale owing to common services (schools' administration, libraries, sport facilities, etc.). It is true as long as communities in IMC's municipalities are homogenous and expect the same quality and level of educational policy. Otherwise, extending the area

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3 The literature review on IMC effects is presented, by e.g. Blaeschke and Haug (2018).

of IMC affects heterogeneity (Alesina, Baqir, Hoxby, 2004: 349). Hence, it might not meet with the approval of local communities. Nevertheless, positive aspects of IMC can be obtained in practice.

## 4. Legal framework for inter-municipal unions in Poland

Polish municipalities are allowed to cooperate in order to provide public goods and services they are obliged to supply. This right is guaranteed by the Constitution of the Republic of Poland (Konstytucja Rzeczypospolitej Polskiej z dnia 2 kwietnia 1997, art. 172) and can be applied in different forms (Ustawa z dnia 8 marca 1990 r. o samorządzie gminnym):

- of greater importance:
  - inter-municipal unions,
  - inter-municipal contracts,
  - inter-municipal associations,
- of lesser importance:
  - inter-municipal companies,
  - consortia,
  - local action groups,
  - local tourist groups.

Inter-municipal unions create the main institutional form of cooperation between municipalities in Poland. They constitute separate entities with legal personality, the right to pursue independent financial management and economic activity. They also possess the right of ownership and have the right to incur liabilities. Inter-municipal unions are managed by two bodies: the assembly (control and resolution-passing authority) and the management board (executive authority). Due to the legal personality of the unions, their assemblies are entitled to make administrative decisions such as determining fee rates e.g. for water supply, sewage disposal, or garbage removal (Ustawa z dnia 8 marca 1990 r. o samorządzie gminnym, art. 64–74).

Table 1 contains data about Polish inter-municipal unions. Since 1990 there were 314 inter-municipal unions created in Poland out of which 205 have been active until 2020.

As for 2020, active unions have been created by 1673 municipalities of which almost two thirds are rural ones. Analysing the number of municipalities in each union, we can distinguish small, medium-sized and large unions. Small unions consist of 2–3 municipalities and constitute around 11% of operating unions. Medium-sized unions (4–9 municipalities) constitute approx. 54% of operating unions.

Large unions consist of 10–20 or even 30 municipalities (35% of operating unions) (MSWiA, 2020).

Table 1. The number of inter-municipal unions in Poland (total since 1990 and active in 2020)

	Total	Active	Active as % of total
Number of unions	313	205	66.45
Number of urban municipalities in unions	450	278	61.78
Number of rural municipalities in unions	1742	1114	63.95
Number of urban-rural municipalities in unions	434	281	64.75

Source: own calculations based on MSWiA, 2020

The reason why rural municipalities are those that cooperate more often can be related to their population size (e.g. Blaeschke, 2014). Differences in the average number of people in Polish municipalities are considerable (Figure 1).

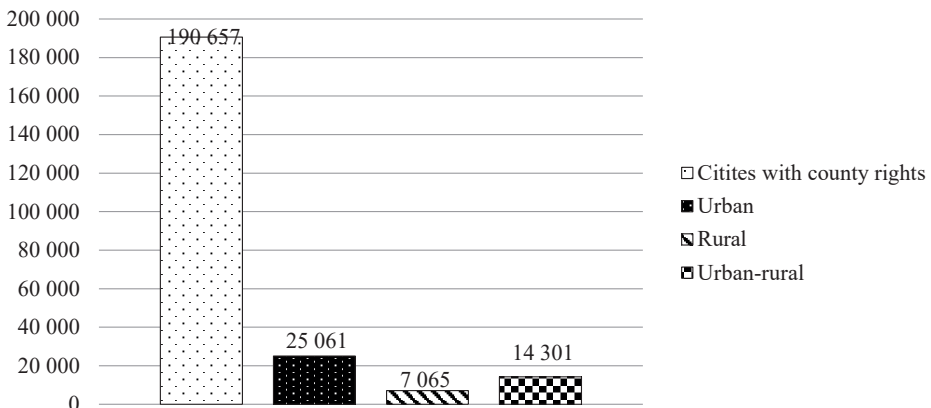


Figure 1. The average population in each type of municipality in 2018

Source: own calculations based on Local Data Bank

The largest disparities can be observed while comparing rural municipalities with other types of municipalities. The population size in rural municipalities is approximately 3.5 times smaller than in urban municipalities and two times smaller than in urban-rural municipalities, on average. As stated before, the size of local government matters regarding the economies of scale and scope. This is simple empirical evidence why Polish inter-municipal unions are mostly created by the smallest municipalities.

With respect to tasks performed by inter-municipal unions, most of them operate to provide public goods and services that concern environmental protection, waste management, water and sewage management, tourism and wastewater treatment (MSWiA, 2020). Some of the unions have been established since

Polish accession to the European Union in order to obtain EU funds (e.g. the Union of the Upper Raba Communities and Kraków). Funds needed to deal with water and sewage management system were too large for these individual municipalities to deal with those issues individually. Hence, establishing the union helped to increase their financial capacity to provide services to citizens (Osterrieder et al., 2006: 16–17).

The decision to cooperate is also determined by financial aspects. Along with delegating public tasks to unions, municipalities must provide appropriate funds. Unions are mostly financed by fees for public services, municipalities' contributions (current and investment) and grants (national and EU). However, the structure of unions' revenues differs depending on the year, e.g. in the period of 2010–2012, the share of EU grants was significantly bigger than before or after (Ministerstwo Finansów, 2016).

The analysis of current expenditures incurred by each type of municipalities, including cities with county rights, and inter-municipal unions provides some evidence (Table 2).

Table 2. Total and average current expenditures in each type of municipality and inter-municipal unions in Poland in 2018 in PLN

	<b>Total</b>	<b>Number of units</b>	<b>Average expenditures per unit</b>	<b>Average per inhabitant</b>
Urban (without cities with county rights)	14 273 841 136	236	60 482 378	2 413
Rural	25 980 048 004	1 547	16 793 825	2 377
Urban-rural	21 429 787 504	628	34 123 865	2 386
Cities with county rights	50 726 243 184	66	768 579 442	4 031
IMC unions	1 687 834 531	205	8 114 589	37

Source: own calculations based on Local Data Bank, local governments' budgetary statements and MSWiA, 2020

Total current expenditures of inter-municipal unions accounted for 1.50% of total current expenditures made by all other units indicated in Table 2. Similarly, they made up 2.73% of municipalities' current expenditures (without cities with county rights). Nonetheless, the share in public current expenditures borne by inter-municipal unions in Poland was low, which is supported by average current expenditures per inhabitant. It also means that there is room for stronger cooperation, especially in the case of rural municipalities.



## 5. Changes in local governments due to the reforms of the education system in Poland

After economic transformation in the 1990s in Poland, which endowed local governments with a great deal of independence, the Polish education system went through a major reform in 1999. Secondary schools were divided into lower secondary schools and upper secondary schools (general, technical and vocational) (Figure 2).

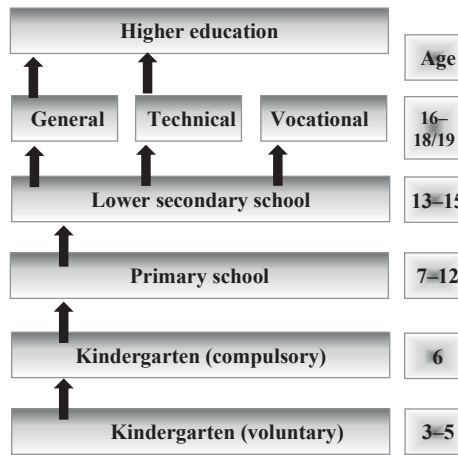


Figure 2. The system of education in Poland in 1999–2017

Source: own elaboration based on Ustawa z dnia 7 września 1991 r. o systemie oświaty

These regulations were applicable until September 2017 when the new reform was carried out. The reform restored the system of education in Poland to a system that consisted of kindergartens and two levels of schools providing compulsory education – primary and lower secondary schools (Figure 3).

Lower secondary schools were ultimately liquidated in 2019. This caused financial problems for municipalities that still have to maintain school buildings but with fewer pupils attending. After the new reform, municipalities are obliged to provide compulsory education not for 9 grades, as it was before, but for 8 grades, which means the loss of the part of the educational unconditional grant that is given to municipalities on the basis of the number of pupils, among others. At the same time, costs of maintaining school buildings have not been reduced.

The financial problem associated with providing public education faced by municipalities is enhanced also due to the demographic decline which affects the number of pupils. The problem has been observed almost continuously since 1999 both in primary (Figure 4) and lower secondary schools (Figure 5).

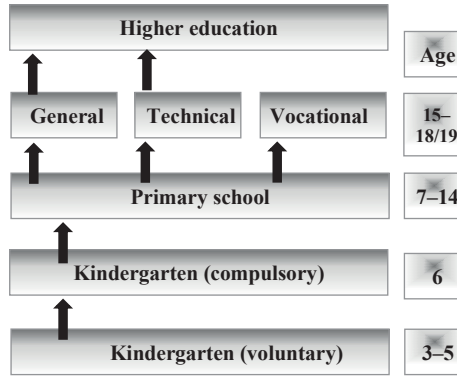


Figure 3. The system of education in Poland since 2017

Source: own elaboration based on Ustawa z dnia 14 grudnia 2016 r. – Prawo oświatowe

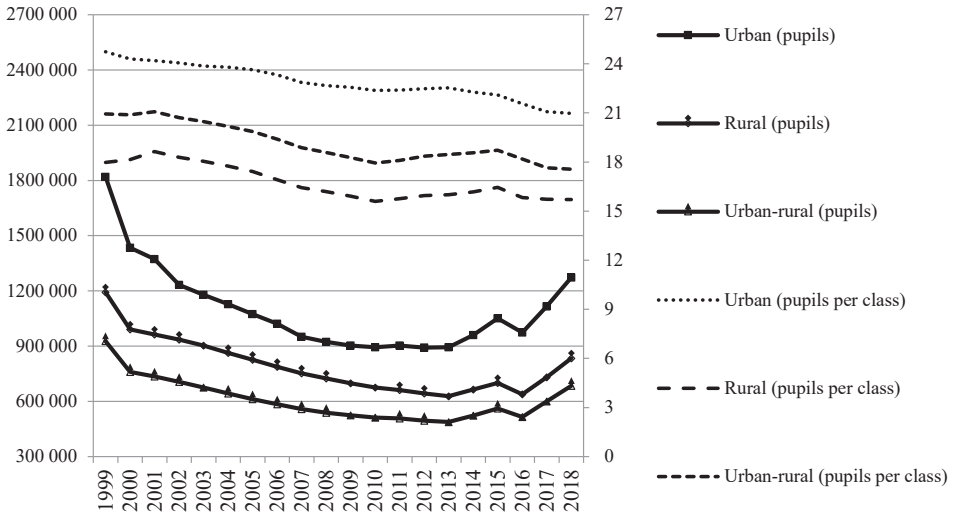


Figure 4. The number of pupils (left axis) and pupils in one class (right axis) in Polish primary schools run by municipalities in 1999–2018

Source: own calculations based on Local Data Bank

The fall in the number of primary school pupils in Poland in 1999–2000 was caused by the reform of the education system. Since then primary schools have run 6 not 8 grades. The demographic decline was reflected in the following years. It should be noted that the increase in 2014–2015 was mainly caused by the change in the age of children starting their compulsory education in primary school – from 7 to 6. The obligation was then restored in 2016 to the age of 7 (Ustawa z dnia 7 września 1991 r. o systemie oświaty). After the new reform, since 2017 the total number of pupils has increased due to the extension of the period of education

in primary school from 6 to 8 years and liquidating lower secondary schools that were run by municipalities until that time.

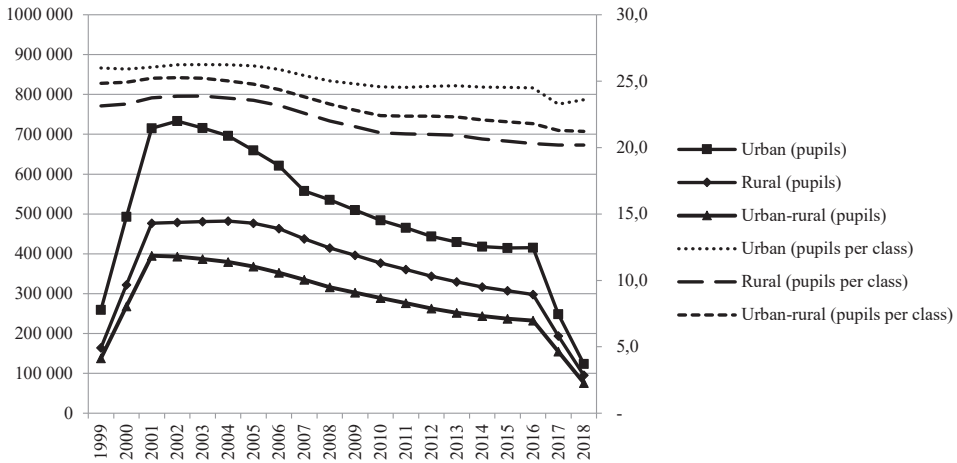


Figure 5. The number of pupils (left axis) and pupils in one class (right axis) in Polish primary schools run by municipalities in 1999–2018

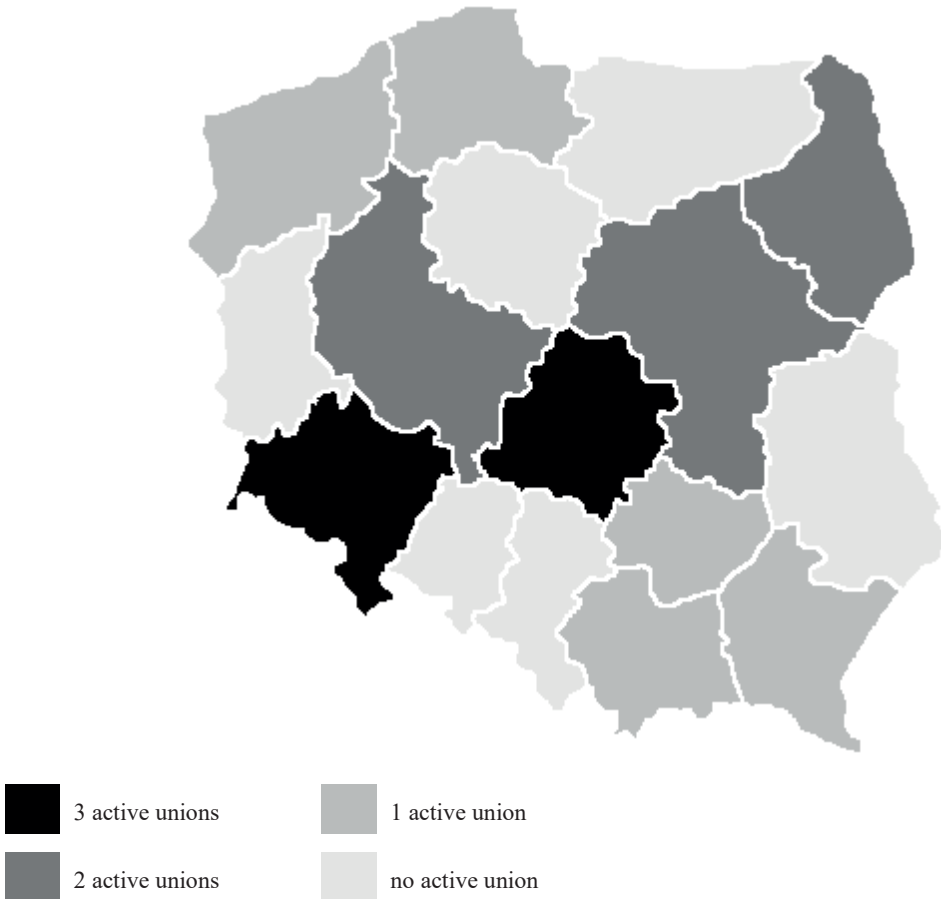
Source: own calculations based on Local Data Bank

Regarding the number of lower secondary students, the change in 1999–2001 was also determined by the reform of the education system. In addition, in the following years, until 2017, the number of pupils was also affected by the demographic decline.

The average number of pupils in one class in primary and lower secondary schools was generally descending in the analysed period. The size of the class can be increased easily by local governments through reducing the number of classes (and hence usually limiting the number of hired teachers). However, such a solution may not necessarily be effective because of the operating costs associated with building maintenance or running libraries, as well as the provision of financial and administrative departments and services. Moreover, public education is perceived as a congestible public good so a lower cost per pupil can be achieved only to a certain point. This point is set by the number of students that are studying together in one class. After reaching this point, the educational policy is inefficient and annoys families (voters). Therefore, seeking other solutions seems to be justified and needed, especially in the case of Polish rural municipalities. Nonetheless, since the 1990s only a few inter-municipal unions have been established to somehow deal with that concern.

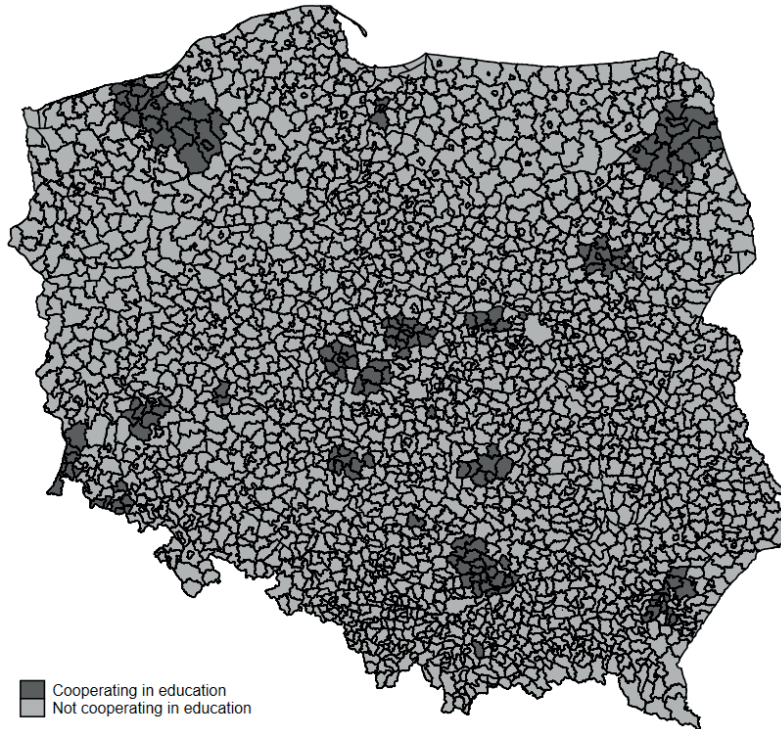
## 6. Inter-municipal cooperation in the field of education in Poland

Out of 205 active unions only 17 (8.29%) have performed some educational tasks. In 10 out of 16 voivodeships municipal authorities have decided to cooperate in the field of education (Map 1). The next map (Map 2) presents municipalities cooperating and not cooperating in education via unions. Cooperating ones are relatively evenly distributed over the territory of Poland.



Map 1. The number of active unions performing tasks in education in each voivodeship in 2020

Source: own calculations based on MSWiA, 2020



Map 2. Polish municipalities cooperating and not cooperating in education

Source: own calculations based on MSWiA, 2020

Though 17 unions claim to perform, among others, educational tasks together, there is only one inter-municipal union in Poland that was established by two municipalities only for educational purposes (MSWiA, 2020). The Gostkowo-Niepart Educational Inter-Municipal Union (*Edukacyjny Związek Międzygminny Gostkowo-Niepart*) was established by two municipalities that struggled with running schools – Krobica and Miejska Górka. Both municipalities are urban-rural, which means they consist of one town and several villages that create a rural area. Their population remained stable in the analysed period (Figure 6). However, when we compare it with the average number of inhabitants in urban-rural municipalities (Figure 1), both Krobica and Miejska Górka are below this average (14,301 inhabitants in 2018 compared to 12,993 in Krobica and 9,356 in Miejska Górka).

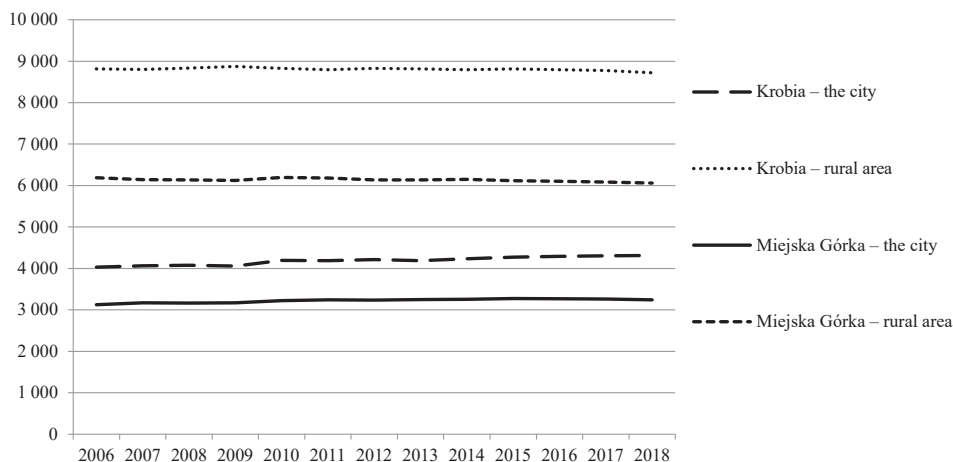


Figure 6. The population of Krobia and Miejska Górka – divided into the city and rural area

Source: own calculations based on Local Data Bank

Regarding the towns, it should be noted that Krobia is approximately 30% bigger than Miejska Górka. However, the difference in the number of citizens is bigger (43%) when considering only rural areas. This implies that joint provision of public services like education could generate economies of scale in the case of the Miejska Górka municipality.

According to the literature, cooperation is usually limited to one county, which may suggest that administrative borders affect it (Fuhrmann et al., 2005). However, although Krobia and Miejska Górka belong to two different counties (Rawicki and Gostyński), they share a border, and, what is most important, similar problems. This case suggests that political or administrative reasons are not always the most important, and decisions to cooperate may be a result of social bottom-up initiatives.

An incentive to create the union emerged after many years of protests of parents and teachers from two urban-rural villages: Niepart (from the Krobia municipality) and Gostkowo (from the Miejska Górka municipality). As many other villages in Poland, they both struggled with consequences of a decrease in the birth rate. This resulted in an insufficient number of pupils in each class. Running classes with a small number of pupils is inefficient in terms of economic issues and – what emerges from studies – children attainment results.<sup>4</sup> Therefore, the primary school in Niepart was about to be shut down on 31 August 2005. Eventually it stopped running grades IV–VI forcing children of this age to commute to the Krobia city (Protokół Nr XXVII/2005 and Nr XXVIII/2005 z sesji Rady Miejskiej w Krobi, Ad. 10; Uchwała Nr XXVIII/199/2005 Rady Miejskiej w Krobi).

4 The impact of the number of pupils in one class on efficiency (inputs: expenditures per one pupil, outputs: tests results) was examined by e.g. Kaczyńska (2017).

However, the old as well the new law enables parents to decide whether their children attend an appropriate school from the point of view of the administrative district or not (Ustawa z dnia 7 września 1991 r. o systemie oświaty, art. 20e ust. 3; Ustawa z dnia 14 grudnia 2016 r. – Prawo oświatowe, art. 133 ust. 2). This regulation was used by parents of 43 pupils who instead of commuting to school in the Krobia municipality continued their education at the school located in the neighbouring municipality's (Miejska Górka) village – Gostkowo (Protokół Nr XXXII/2005 and Nr XXXIV/2005 z sesji Rady Miejskiej w Krobi). Data concerning the number of pupils and classes in primary schools in rural areas<sup>5</sup> of Krobia and Miejska Górka are presented in Figure 7.

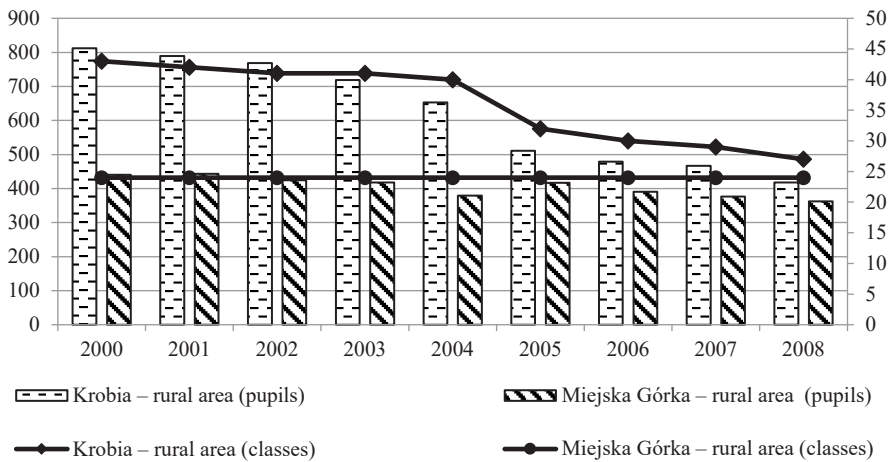


Figure 7. The number of pupils (left axis) and classes (right axis) in primary schools in rural areas of Krobia and Miejska Górka municipalities in 2000–2008

Source: own calculations based on Local Data Bank

The decline in the number of pupils in Krobia was recorded especially in 2005 and was caused not only by the decrease in the number of school children. It was also a consequence of changing the school district in another municipality – Miejska Górka. As a result, Krobia got less funds from the central government for running its schools. In accordance with the law, the educational part of the grant given to a municipality for running its school is calculated<sup>6</sup> mainly on the basis

5 The rural area of Krobia consists of 26 villages (including Niepart) and in the rural area of Miejska Górka there are 42 villages apart from Gostkowo.

6 The amount of the educational grant redistributed from the central government to each local government is calculated using the algorithm of division of the educational grant that includes many coefficients such as: the number of pupils, the number of disabled pupils, the type of educational institution run by the municipality, the school, the location (rural, urban), the level of professional advancement of teachers, etc. (Rozporządzenie Ministra Edukacji Narodowej

of the number of pupils that attend schools and kindergarten in this municipality (Rozporządzenie Ministra Edukacji Narodowej i Sportu z dnia 28 grudnia 2004 r. w sprawie sposobu podziału części oświatowej subwencji ogólnej dla jednostek samorządu terytorialnego w roku 2005; Rozporządzenie Ministra Edukacji Narodowej z dnia 12 grudnia 2019 r. w sprawie sposobu podziału części oświatowej subwencji ogólnej dla jednostek samorządu terytorialnego w roku 2020).

Taking all this into consideration, the local authorities of Krobia and Miejska Górka decided to join their forces to create the Educational Inter-Municipal Union Gostkowo-Niepart based in Niepart (a village of the Krobia municipality) (Uchwała Nr XXIV/179/2008 z sesji Rady Miejskiej w Krobi). The union was established in September 2009 to run the following educational institutions (Statut Zespołu Szkół w Gostkowie):

- primary school (with kindergarten) located in Niepart (Krobia municipality),
- lower secondary school located in Gostkowo (Miejska Górka municipality).

The district of the union covers two villages from Krobia (Niepart and Gogolewo) and four villages from Miejska Górka (Gostkowo, Zmysłowo, Rozstępniewo, Roszkówko). Since 2017, due to lower secondary schools' closure, the union has been running only one primary school in Niepart (Krobia).

Before analysing financial consequences of the creation of the union, the number of pupils and classes run by each municipality and union should be shortly discussed. Figure 8 depicts the average number of pupils in one class and the total number of pupils in primary schools in 2006–2018.

The total number of pupils that attended primary schools located in Krobia and Miejska Górka was stable in the period of 2008–2013 that covered the year of setting up the union. The fact that the demographic decline was not a determinant in this case is crucial from the viewpoint of the further analysis. Before 2010 the number of pupils in one class both in schools of Krobia and Miejska Górka was relatively low and similar, which suggests unexploited scale economies. The situation changed after 2009 – the size of classes in both municipalities increased and was affected in 2014–2016 by the change of the birth rate, and, primarily, by the change in the age of children starting their compulsory education in primary school – from 7 to 6. At the same time, the number of pupils in one class of the union's school fell relatively rapidly and was not in accordance with the rise in the total number of pupils in both municipalities. The rise in the number of pupils in 2017 and 2018 was mainly caused by the new reform of the education system.

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z dnia 12 grudnia 2019 r. w sprawie sposobu podziału części oświatowej subwencji ogólnej dla jednostek samorządu terytorialnego w roku 2020).



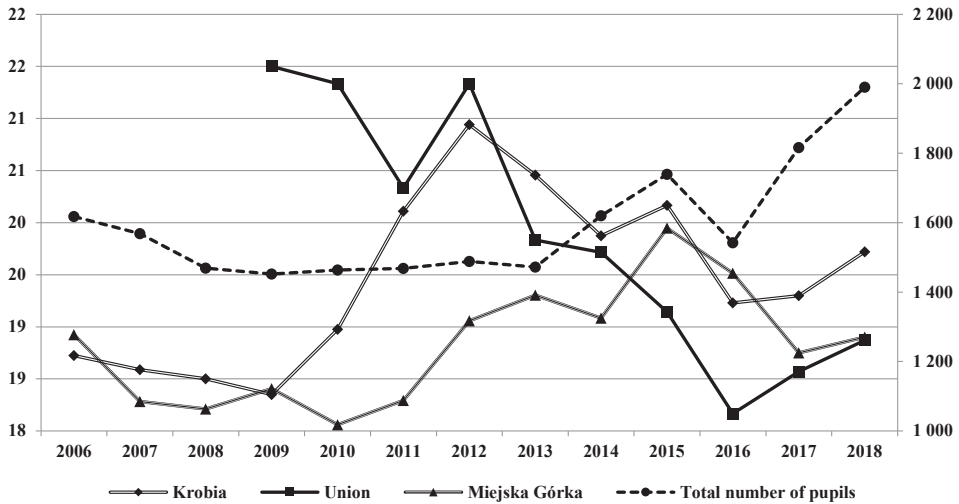


Figure 8. The average number of pupils in one class in primary schools (left axis) and the total number of pupils (right axis) in Krobia, Miejska Górka and the union in 2006–2018

Source: own calculations based on Local Data Bank

The total number of pupils in lower secondary schools (Figure 9) decreased in both municipalities in 2006–2011 to reach a relatively stable level in 2012–2014 and 2015–2016. This alteration was accompanied by the changes in the number of primary school pupils – the fall in 2006–2008 in lower secondary schools corresponds with the fall in primary schools and similarly – the steadiness in the subsequent years. As a consequence of the new reform of the education system, the number of pupils has begun declining since 2017.

Until 2011, the decrease in the size of lower secondary school classes in Krobia and Miejska Górka could be explained by the demographic change. Nonetheless, the rise in 2011 is not in accordance with the total number of pupils and could be related to the creation of the union. However, it seems that after the union was created both municipalities managed to boost the size of their lower secondary school classes (presumably decreasing current expenditures per pupil). The union itself adjusted its policy of supplying public goods and created an additional (third) class in 2011 due to the rise in the number of pupils from 46 in 2010 to 67 in 2011. The number of classes run by the union remained unchanged until the new reform of the education system (Figure 10).

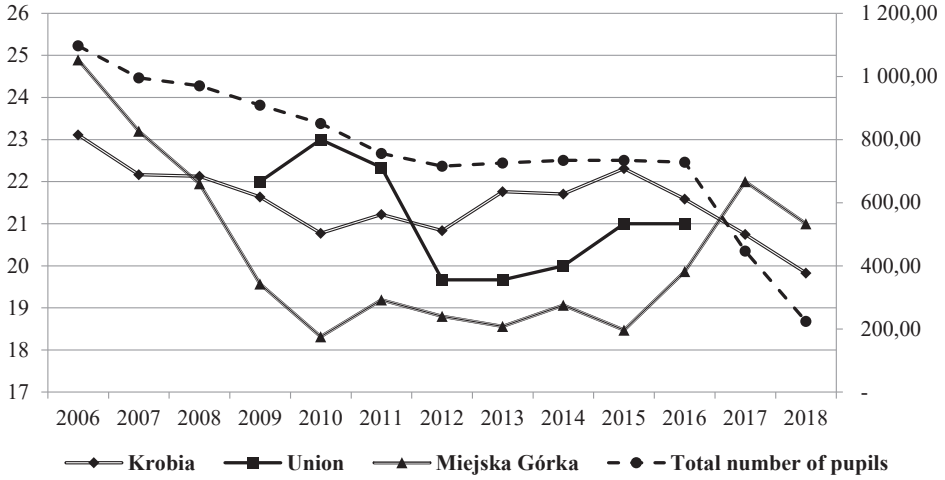


Figure 9. The average number of pupils in one class (left axis) in lower secondary schools and the total number of pupils (right axis) in Krobia, Miejska Górka and the union in 2006–2018

Source: own calculations based on Local Data Bank

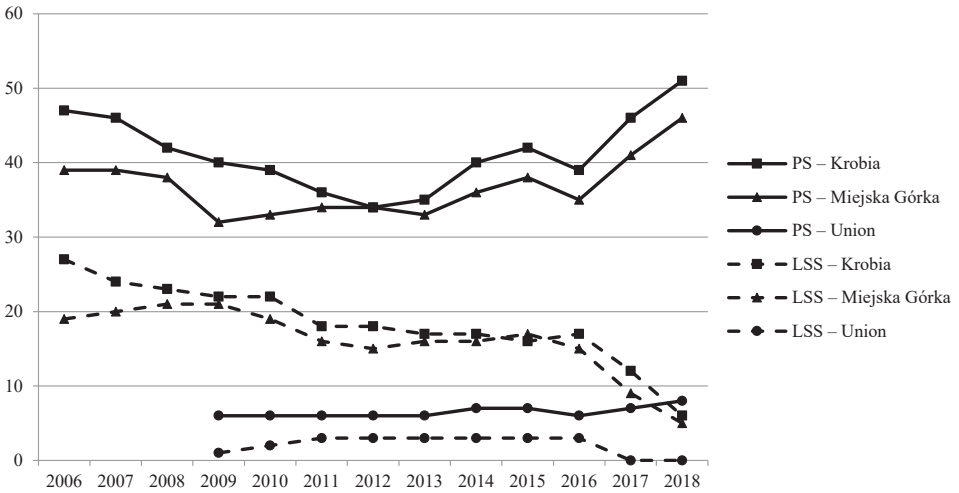


Figure 10. The number of classes run by Krobia, Miejska Górka and the union in primary (PS) and lower secondary schools (LSS) in 2006–2018

Source: own calculations based on Local Data Bank

The establishment of the union by the Krobia and Miejska Górká municipalities aimed mostly at meeting local inhabitants' needs. But did it help the union founders to generate economies of scale and scope, and hence lower spending per pupil? In order to assess this, the analysis of spending per pupil and the number of pupils in each municipality and the union was performed.<sup>7</sup> However, spending per pupil reflects both scale effects and varying levels of provided public service (public education in this case) that can be identified with the number of pupils in one class.

## 7. Results and discussion based on the chosen case study

First, the analysis is focused on primary schools. Regarding the Krobia municipality, in 2006–2010 the mean of current expenditures per pupil (Figure 11) was increasing despite limiting the number of classes (Figure 10) because of the diminishing number of pupils. The situation changed in 2010 and 2011, when despite a small increase in the number of pupils, costs fell much more, which can suggest generation of scale effects after the union was created. In 2012, spending per pupil increased slightly compared to 2011, to start falling until 2016. This change was accompanied by the increased number of classes with fewer pupils, which could have resulted from economies of scale as well as from the new temporary educational policy change (6-year old children started their compulsory education in primary schools until 2016). The rise in current expenditures per pupil since 2016 can be explained by a decline in the number of pupils because of the new reform. Therefore, it is hard to assess the impact of cooperation on spending per pupil in 2017–2018. In Miejska Górká, the situation was practically analogical to Krobia when comparing spending per pupil to the number of pupils, the number of classes and pupils per class. In the case of primary school run by the union, costs per pupil were fluctuating within a relatively small range in 2010–2015 to rise afterwards (Figure 11). This coincided with a stable number of classes and a declining number of pupils in one class. Later the number of pupils decreased causing a rise in expenditures that continued in 2017–2018 due to the reform of the education system.

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7 The costs used for the purpose of the analysis cover only current expenditures, fixed prices: base year – 2018. However, current expenditures accounted for approximately 91% of total expenditures in Krobia, Miejska Górká and the union in 2006–2018 on average.

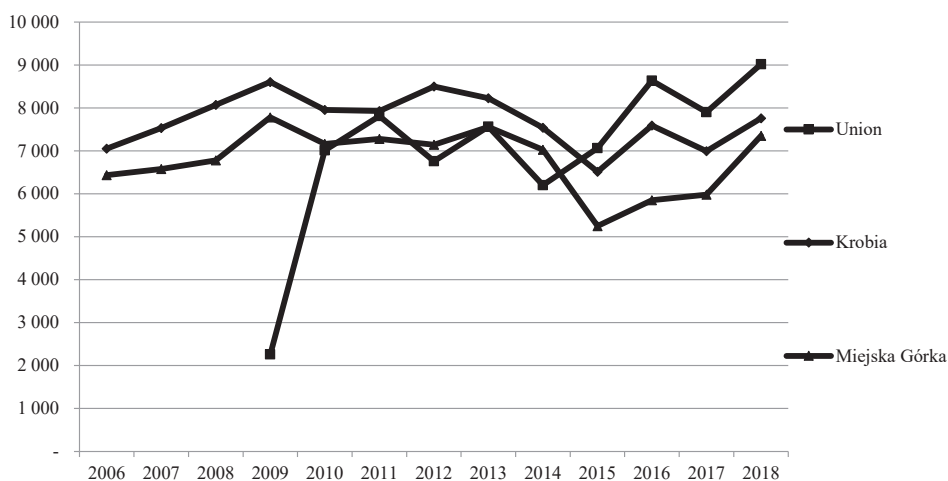


Figure 11. Spending per pupil in primary schools of Krobia, Miejska Górka and the union in 2006–2018

Source: own calculations based on Local Data Bank and local governments' budgetary statements

Regarding lower secondary schools, both in Krobia and Miejska Górka, the trend of spending per pupil (Figure 12) compared to the number of pupils, the number of classes (Figure 10) and pupils per class (Figure 9) was quite similar. Costs stopped rising in 2012 when the mean number of pupils per one class increased while the number of classes remained relatively stable. It could be that the establishment of the union helped to keep the rising costs down and ultimately led to their decrease since 2014. The situation continued until 2016, after which spending per pupil was affected by the previously indicated changes in the education system. However, it must be noted that positive effects in spending per pupils were larger in Miejska Górka, which can point to exploiting economies of scale. In the school run by the union in 2009–2017, at first current expenditures per pupil were rising until 2012 because of an increasing number of classes and a decreasing number of pupils per one class at the end of this period. Since 2013 costs have become relatively stable.

The creation of the union by two municipalities and transferring part of educational tasks to it lowered slightly costs per student in primary schools in both municipalities in the beginning. In the subsequent years expenditures per pupil incurred by municipalities and the union were comparable. In the case of lower secondary schools, it seems that there is no evidence for a reduction of costs per pupil. Therefore, joining forces in order to provide inhabitants with a different organisation of educational services has contributed only to a higher level (or quality) of these services rather than to generating the economies of scale.

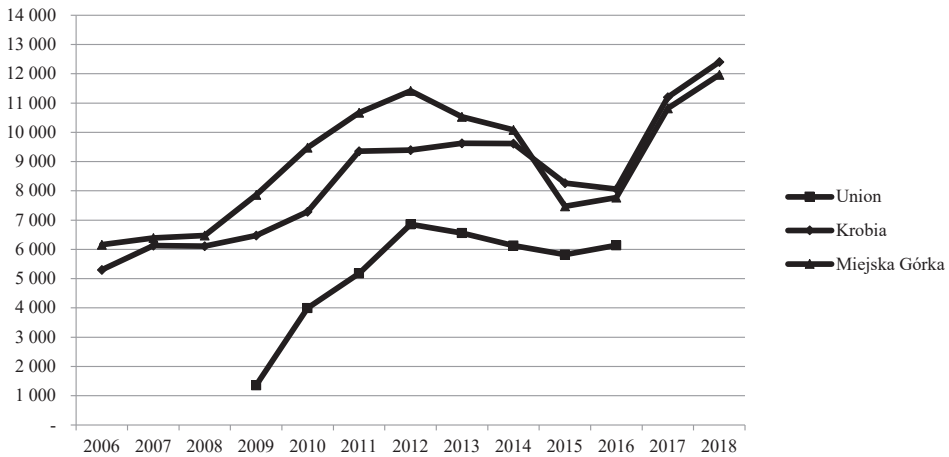


Figure 12. Spending per pupil in lower secondary schools of Krobia, Miejska Górka and the union in 2006–2018

Source: own calculations based on Local Data Bank and local governments' budgetary statements

There is a possible explanation of limited positive financial effects of joint public education provision in the case of the Gostkowo-Niepart Educational Inter-Municipal Union. Both municipalities that decided to cooperate are urban-rural. One could argue that the population in two medium-sized municipalities is not homogenous enough – some pupils study in schools run by Krobia, some in Miejska Górka, and some of them in schools run by the union. The provision of public education is then incompletely transferred from local governments to the union. It could be inefficient to organise common welfare service in such a big area, although it would have to be investigated.

## 8. Conclusions

The aim of this article was to present and analyse IMC in the context of public good such as education supported by the case study of the only one purely educational inter-municipal union in Poland. Nowadays problems with performing educational duties by Polish municipalities are not only due to the demographic decline but also to the reform of the education system that started in 2017. Moreover, fiscal austerities and the society's growing awareness increase the pressure on local governments to find efficient and effective solutions. One of such solutions is to deliver public services jointly, which can help to keep the raising costs down, and hence increase efficiency of public spending as well as the quality of public services. Studies show that net benefits of cooperating are higher if IMC partners are smaller and more homogenous and if they expect similar quality and level of public services.

The need to find efficient solutions rises also due to COVID–19, e.g. in joint purchase of remote learning software or developing forms of such learning.

So far, there is only one inter-municipal union in Poland that is solely providing educational services. The decision to create the union by Krobia and Miejska Górka to jointly fulfil some part of their educational duties seems to be reasonable from the perspective of pupils and their parents as well as teachers, who are also voters. Moreover, some success in generating economies of scale was achieved in the case of primary schools in the first two years after the union was created. However, according to the results, the theory of exploiting the benefits of scale economies owing to inter-municipal cooperation focused on education could be true for smaller or rural municipalities in the case of Poland. Therefore, common provision of compulsory public education could be used especially by smaller and rural municipalities that struggle with demographic decline and the pressure to efficiently use public funds since they were forced to reorganise their school networks due to the reform of the education system in Poland or to purchase remote learning software gaining in importance due to the pandemic. It would be very interesting though to conduct a detailed study to assess the exact determinants and effects of such cooperation implemented by Polish municipalities. It could also be useful to know to what extent cooperation is mainly caused by the voters' will or budgetary challenges, and to what extent by political factors.

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### **Współpraca międzygminna w edukacji jako możliwe remedium na obecne trudności samorządu terytorialnego w Polsce**

**Streszczenie:** Celem artykułu jest wypełnienie istniejącej luki badawczej i wniesienie wkładu do literatury na dwa sposoby: po pierwsze – poprzez zbadanie problemów, które zapoczątkowały współpracę między dwiema gminami pomimo granicy administracyjnej na poziomie powiatu, a po drugie – poprzez analizę skutków wspólnie realizowanych zadań edukacyjnych na podstawie studium przypadku z Polski. Studium przypadku jest poprzedzone analizą literatury. Wzmocnienie współpracy międzygminnej (IMC) w Polsce jest proponowane jako potencjalne remedium na obecne trudności, z jakimi borykają się polskie samorządy po reformie systemu edukacji i pandemii Covid-19, a także z powodu niżu demograficznego i presji budżetowej. Badania sugerują, że korzyści netto ze współpracy są wyższe, jeśli partnerzy związku są mniejsi i bardziej jednorodni pod względem jakości i poziomu usług publicznych. Teoria wykorzystania korzyści skali i zakresu została zbadana na podstawie studium przypadku polskiego związku międzygminnego utworzonego wyłącznie w celu świadczenia usług edukacyjnych w dwóch gminach. Współpraca przyniosła niewielkie pozytywne efekty finansowe, które znalazły odzwierciedlenie w niższych wydatkach w przeliczeniu na jednego ucznia jedynie w przypadku szkoły podstawowej. Kooperacja spowodowała jednak pojawienie się korzyści pozafinansowych nie tylko u uczniów, ale także u rodziców i nauczycieli będących jednocześnie wyborcami. W artykule stwierdzono, że ze związków międzygminnych najbardziej mogą skorzystać gminy małe i wiejskie, borykające się z wcześniej wspomnianymi problemami.

**Słowa kluczowe:** współpraca międzygminna, system edukacji, reforma, Polska, Covid-19

**JEL:** H70, H75, H77, H79



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