

THE CENTRE FOR URBAN STATISTICS  
THE STATISTICAL OFFICE IN POZNAŃ

**A summary of the methodological study  
„Students commuting to schools in Poland”**

POZNAŃ, 2022

## **1. Origin of the study**

Commuting to school, in addition to work-related commuting, is a considerable part of daily population mobility flows. Information about the intensity and directions of circular migration associated with the education of children and teenagers is essential for different levels of local government (in provinces, districts and municipalities) to be able to identify spatial and functional relationships. This kind of knowledge is crucial for implementing rational financial policy, planning transport solutions or developing appropriate spatial policy, particularly regarding problems of delimitation. Until recently there were no official statistics on commuting flows related to school education, which was the motivation behind a 2018 experimental study entitled „Students commuting to schools located in provincial cities”, conducted as part of the Operational Programme Technical Assistance 2014-2020. That first attempt at a statistical description of commuting to schools was evaluated as successful by a large group of users, who thought it should be continued and extended to include all municipalities in Poland. In their opinion, the results of the experimental study provide useful insights, especially for units of local government, and meet users’ information needs. With this mind, the Statistical Office in Poznań launched a methodological study whose goal was to validate the methodology developed in the experimental study and extend its territorial scope by including all municipalities in Poland.

## **2. Aim and scope of the methodological study**

The main objective of the study was to measure the intensity and directions of commuting between municipalities undertaken by students of schools in Poland. The main objective was achieved by accomplishing the following specific goals, i.e.:

- extending the spatial scope of the study of commuting to schools in provincial cities by including commuting flows between all municipalities in Poland, in response to requests made by users after the publication of the experimental study mentioned above,
- assessing the possibility of using data from the Educational Information System for the purpose of an annual study included in the Statistical Survey Programme of Official Statistics.

The main outcomes of the methodological study included:

- a study of commuting to schools based mainly on information from administrative sources,
- a quality assessment of the results,
- a methodological report about a new study to be included in the Statistical Survey Programme of Official Statistics entitled „Students commuting to primary and secondary schools”.

### 3. Method

The target population of the study included students analysed in terms of their municipality of residence and the municipality where they went to school in the school year 2019/2020. A distinction was made between schools for children and teenagers (primary and secondary schools) and schools for adults. The study covered all municipalities in Poland.

Data on commuting to schools were obtained from the Educational Information System maintained by the Ministry of Education and Science. The study did not include pupils attending pre-primary sections of primary schools or students attending schools organisationally associated with a non-educational entity (e.g. healthcare social assistance institutions, correctional facilities, juvenile shelters, Voluntary Labour Corps, in juvenile detention centres or custody suites).

The target population of students commuting to schools is selected from the population of all students registered in the Educational Information System (SIO) taking into account the following criteria<sup>1</sup>:

- they live in a municipality other than the one where they go to school,
- they do not live in a boarding house,
- they are not homeschooled.

**Students commuting to school** are defined as students who attend a school in a different municipality from the one where they live.

Taking into account their place of residence, students who leave their municipality of residence and commute to another municipality where their school is located are defined as **outgoing students**.

Taking into account the place where they go to school, students who come to the municipality where their school is located from a municipality where they live are defined as **incoming students**.

### 4. Study results

Information about counts of students<sup>2</sup> commuting to school is broken down by municipality – i.e. with separate counts for municipalities of residence and municipalities which students commute to – and by school type, with separate counts for primary, secondary schools and schools for adults. The results are presented in the form of a matrix of commuting flows related to school education. The matrix shows only flows involving at least 3 students<sup>3</sup>.

The analysis conducted during the methodological study indicates that 1215.2 thousand students commuted to all types of schools in the school year 2019/2020 in Poland.

213.3 thousand students commuted to primary schools. By far the biggest commuting flows were observed in the case of students commuting to secondary schools, who accounted for nearly 79% of students commuting to schools for children and teenagers.

Commuting flows to schools for adults were only calculated for all types of schools combined and amounted to 213.6 thousand adults in the whole country.

There is much variation across municipalities in terms of commuting flows related to school education. Overall, the number of students commuting to primary schools ranged from 0 to 2069. There was only one municipality for which no outgoing student was registered. As regards secondary schools,

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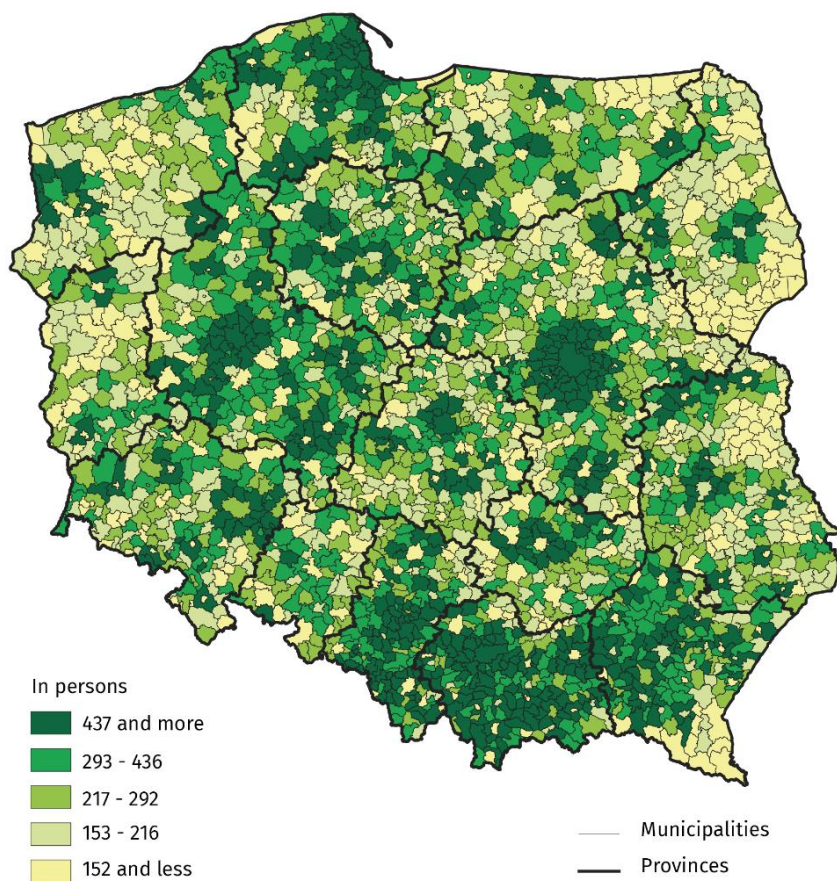
<sup>1</sup> The effect of the COVID-19 pandemic on students' mobility and the scale of remote education was not accounted for.

<sup>2</sup> The term 'student' is used to refer to children, teenagers and adults.

<sup>3</sup> Given the experimental nature of study, these results should be treated with caution.

the number of outgoing students ranged from 29 to 2565. There was at least one student in each municipality who commuted to a secondary school or a school for adults.

*Figure 1. Outgoing students commuting to secondary schools in the school year 2019/2020, by municipality*

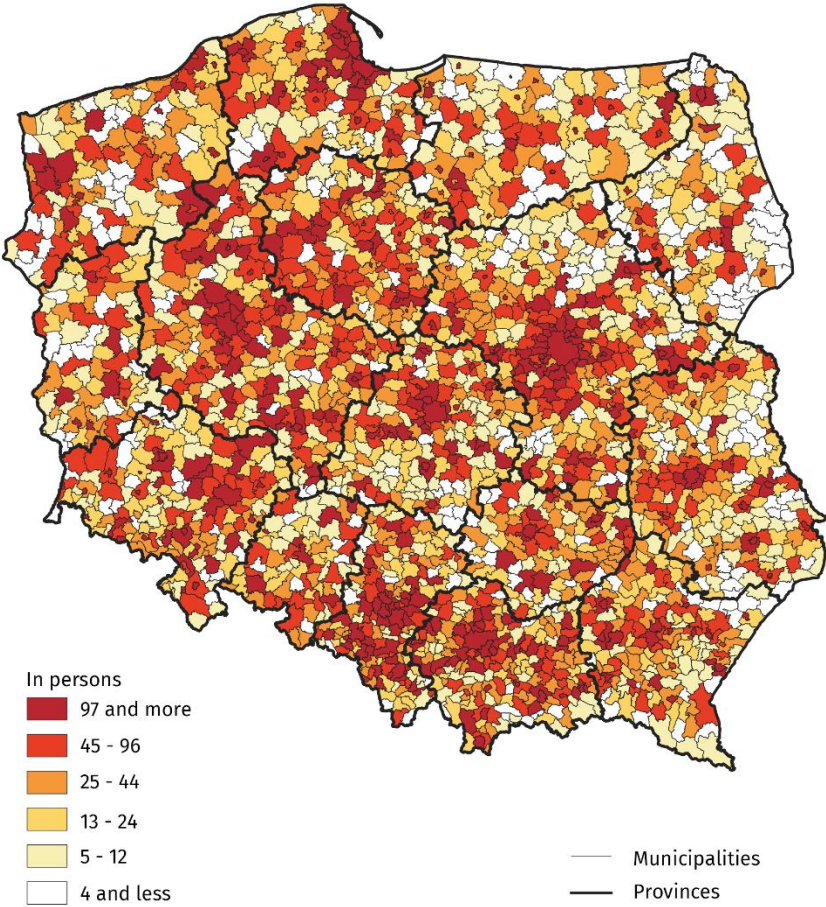


*Source: own elaboration.*

As in the case of commuting flows analysed in terms of the place of residence, there was much spatial variation with respect to the municipality of education. It was evidenced by the number of incoming students and the number of municipalities where incoming students were observed.

The spatial distribution of incoming students commuting to primary and secondary schools located in a municipality other than the one where they live is shown in the following choropleth maps.

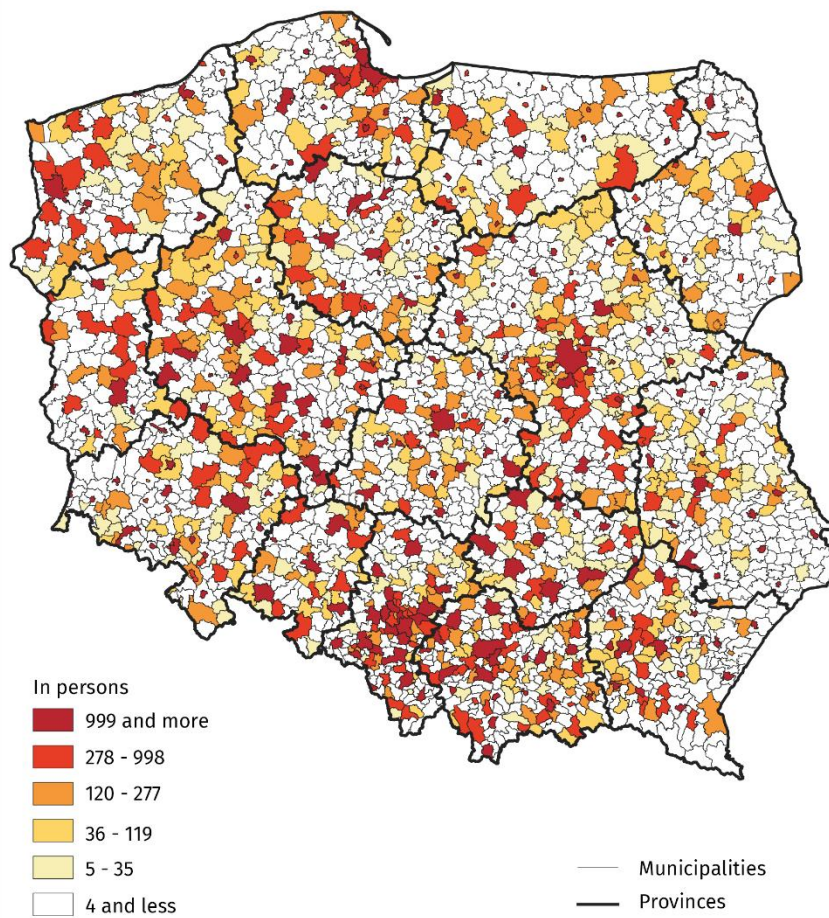
Figure 2. Incoming students commuting to primary schools in the school year 2019/2020, by municipality



Source: own elaboration.



**Figure 3.** Incoming students commuting to secondary schools in the school year 2019/2020, by municipality



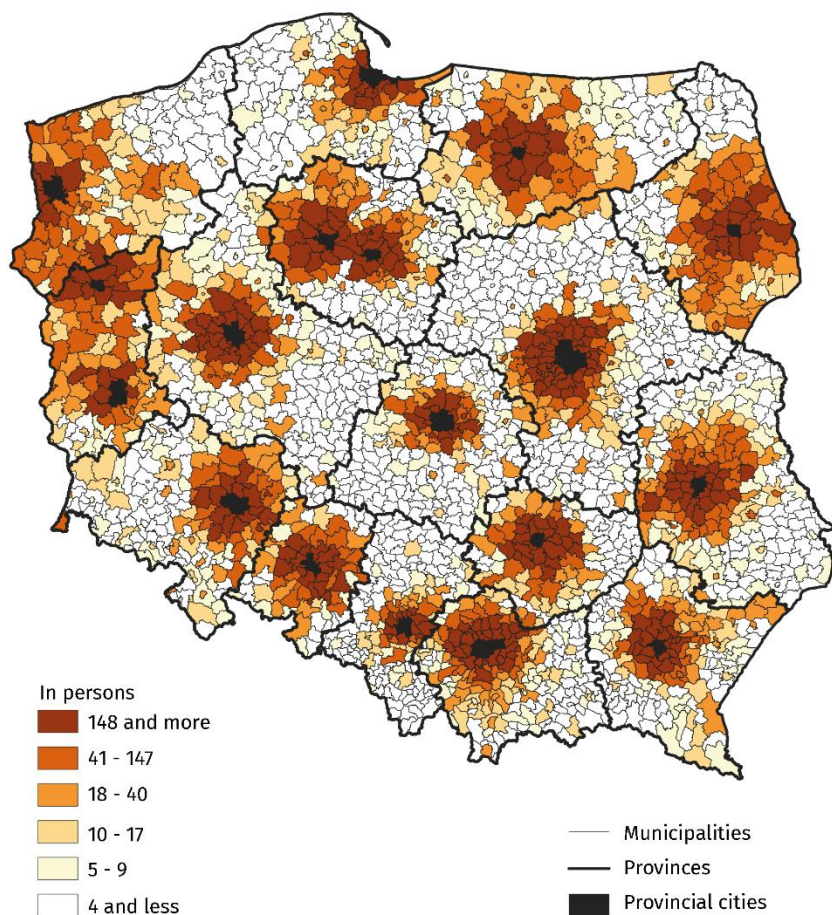
Source: own elaboration.

The above choropleth maps – in addition to present the spatial distribution of incoming students by school type – show the density of schools of a given type in Poland. The network of primary schools is relatively dense in order to enable compulsory school attendance imposed by relevant legislation, compared to a less dense network of secondary schools, which are an example of high-order services.

The group of 20 municipalities receiving the largest number of incoming students attending primary and secondary schools and schools for adults are urban municipalities, most of which are provincial cities. This prompted the authors of the study to conduct a more in-depth analysis of the intensity and directions of commuting flows related to school education to and from provincial cities.

In the entire population of provincial cities by far the biggest number of incoming students commuted to secondary schools (179.8 thousand in total). As can be seen in the following choropleth map, most students commuted to a given provincial city from adjacent municipalities or those that were easily accessible by public transport.

Figure 4. Incoming students commuting to secondary schools located in provincial cities in the school year 2019/2020, by municipality



Source: own elaboration.

## 5. Summary

Since information resources of official statistics did not contain data linking a student's place of residence with the place he or she goes to school, the Statistical Office in Poznań made an attempt to estimate the intensity and identify directions of commuting to schools using administrative data from the Educational Information System maintained by the Ministry of Education and Science. The methodological study entitled "Students commuting to schools in Poland" demonstrated the usefulness of this data source and yielded results, which the authors of the study consider to be satisfying. In view of the above and recognising the possibility of quickly delivering information about directions and the size of commuting flows to schools in Poland, and after taking into account remarks of the Methodological Commission of Statistics Poland, the Statistical Office in Poznań has proposed that a new annual survey entitled "**Students commuting to primary and secondary schools**" should be included in the Statistical Survey Programme of Official Statistics, starting from 2022 for the school year 2022/23.

It is particularly worth noting that the new survey is consistent with the new paradigm in statistical data collection, which is characterised by a shift away from surveys in which respondents are required to answer questionnaires towards a growing reliance on information stored in administrative registers.

It should also be emphasised that the use of information from the Educational Information System maintained by the Ministry of Education and Science opens a possibility for publishing very timely statistics.