Description of the data

The main dataset stored in the file "data_municipalities.csv" includes 100 variables and 2477 observations. It summarizes selected characteristics of Polish municipalities (in Polish *gmina*) which are described in Table 1. The data on percentage of inhabitants fully vaccinated against COVID-19 comes from the Polish Ministry of Health and **refers to the end of the year 2021** while all the other variables were collected from the Local Data Bank of Statistics Poland (https://bdl.stat.gov.pl) and **refer to year 2020**.

Table 1. Description of variables from the file "data_municipalities.csv"

variable name	variable description
municipality_code	unique municipality code (TERYT) - 8 digit number. The first two digits represent the code of the voivodeship (region), and the last digit represents a type of the municipality (1 = urban, 2 = rural, 3 = mixed urban-rural)
municipality_name	name of the municipality
county_code	code of the county in which the municipality is located
percent_vaccinated	percentage of inhabitants fully vaccinated against COVID-19 (**dependent variable**)
population_total	total population
population_total_m	total male population
population_total_f	total female population
population_0_4_total	total population aged 0-4 years
population_0_4_total_m	total male population aged 0-4 years
population_0_4_total_f	total female population aged 0-4 years
population_5_9_total	total population aged 5-9 years
population_5_9_total_m	total male population aged 5-9 years
population_5_9_total_f	total female population aged 5-9 years
population_10_14_total	total population aged 10-14 years
population_10_14_total_m	total male population aged 10-14 years
population_10_14_total_f	total female population aged 10-14 years
population_15_19_total	total population aged 15-19 years
population_15_19_total_m	total male population aged 15-19 years
population_15_19_total_f	total female population aged 15-19 years
population_20_24_total	total population aged 20-24 years
population_20_24_total_m	total male population aged 20-24 years
population_20_24_total_f	total female population aged 20-24 years
population_25_29_total	total population aged 25-29 years
population_25_29_total_m	total male population aged 25-29 years
population_25_29_total_f	total female population aged 25-29 years
population_30_34_total	total population aged 30-34 years
population_30_34_total_m	total male population aged 30-34 years

population_30_34_total_f	total female population aged 30-34 years
population_35_39_total	total population aged 35-39 years
population_35_39_total_m	total male population aged 35-39 years
population_35_39_total_f	total female population aged 35-39 years
population_40_44_total	total population aged 40-44 years
population_40_44_total_m	total male population aged 40-44 years
population_40_44_total_f	total female population aged 40-44 years
population_45_49_total	total population aged 45-49 years
population_45_49_total_m	total male population aged 45-49 years
population_45_49_total_f	total female population aged 45-49 years
population_50_54_total	total population aged 50-54 years
population_50_54_total_m	total male population aged 50-54 years
population_50_54_total_f	total female population aged 50-54 years
population_55_59_total	total population aged 55-59 years
population_55_59_total_m	total male population aged 55-59 years
population_55_59_total_f	total female population aged 55-59 years
population_60_64_total	total population aged 60-64 years
population_60_64_total_m	total male population aged 60-64 years
population_60_64_total_f	total female population aged 60-64 years
population_65_69_total	total population aged 65-69 years
population_65_69_total_m	total male population aged 65-69 years
population_65_69_total_f	total female population aged 65-69 years
population_70_74_total	total population aged 70-74 years
population_70_74_total_m	total male population aged 70-74 years
population_70_74_total_f	total female population aged 70-74 years
population_75_79_total	total population aged 75-79 years
population_75_79_total_m	total male population aged 75-79 years
population_75_79_total_f	total female population aged 75-79 years
population_80_84_total	total population aged 80-84 years
population_80_84_total_m	total male population aged 80-84 years
population_80_84_total_f	total female population aged 80-84 years
area_km2	area in square kilometeres
population_density	population density (population per 1 km2)
urbanization_rate	urbanization rate (share of the urban area within the municipality)
healthcare_advices	primary health care - total number of advices
population_per_pharmacy	population per a generally accessible pharmacy
installations_watersupply	apartments equipped with installations, % of apartments with water supply
installations_toilet	apartments equipped with installations, % of apartments with flushable toilet
installations_bathroom	apartments equipped with installations, % of apartments with a bathroom
installations_central_heating	apartments equipped with installations, % of apartments with central heating
installations_network_gas	apartments equipped with installations, % of apartments with network gas
appartment_area_per_person	average usable area of the apartment per person

appartments_per_1000_persons	number of apartments per 1,000 inhabitants
persons_per_appartment	average number of people per apartment
persons_per_room	average number of people per room
persons_per_library	population per 1 library facility
library_books_per_1000_persons	library book collection per 1,000 inhabitants
library_readers_per_1000_persons	public library readers per 1,000 inhabitants
library_loans_per_reader	loan of book collections per reader in volumes
forests_area	total area of forests (in hectars)
unemployed_total	number of unemployed inhabitants - total
unemployed_f	number of unemployed inhabitants – females
unemployed_m	number of unemployed inhabitants – males
unemployed_up_to_25	number of unemployed inhabitants – up to 25 years of age
unemployed_over_50	number of unemployed inhabitants – over 50 years of age
unemployed_long_term	number of long-term unemployed inhabitants
unemployment_rate	Share of the registered unemployed in the total working-age population
unemployment_rate_m	Share of the registered unemployed in the working-age population – males
unemployment_rate_f	Share of the registered unemployed in the working-age population – females
bicycle_paths_per_100km2	bicycle paths per 100 km2
bicycle_paths_per_10k_persons	bicycle paths per 10 thousand population
revenues_per_capita	total revenues of municipality budget per inhabitant
revenues_per_capita_PIT	total revenues of municipality budget from personal income tax per inhabitant
revenues_per_capita_CIT	total own revenues of municipality budget from corporate income tax per inhabitant
expenditures_per_capita	total expenditures of municipality budget per inhabitant
investment_expenditures_per_capita	total investment expenditures of municipality budget per inhabitant
children_3_5_in_kindergartens	children in kindergartens and other forms of pre-school education per 1,000 children aged 3-5
net_scholarization_primary	net scholarization ratio for primary education
marriages_per_1000_persons	marriages per 1000 inhabitants
birthrate_per_1000_persons	birthrate per 1000 inhabitants
net_migrations_per_1000_persons	net migrations per 1000 inhabitants
persons_running_business	total number of inhabitants running a business
entities_registered_per_10k_persons	number of entities registered per 10 thousand inhabitants

Some characteristics of local units are only available on the higher administrative level – counties (in Polish *powiat*). There are 380 counties in Poland, each aggregates several municipalities. 65 of the counties are basically cities with county rights (fully urban counties). The additional dataset stored in the file "data_counties.csv" includes 12 variables and 380 observations. It includes a set of characteristics of Polish counties that **refer to the year 2020** and are described in Table 2.

Table 2. Description of variables from the file "data_counties.csv"

variable name	variable description
county_code	unique county code (TERYT) - 8 digit number. The first two digits represent the code of the voivodeship
county_name	name of the county (powiat) - the prefix "m. " indicates it is a city on powiat rights (fully urban county)
average_wage_relative	average monthly gross wages in relation to the national average (Poland = 100)
doctors_per_1000_persons	doctors working in a county per 10 thousand population
beds_in_hospitals	beds in general hospitals
cars_per_1000_persons	passenger cars registered per 1000 inhabitants
motorcycles_per_1000_persons	motorcycles registered per 1000 inhabitants
education_share_higher	share of population aged 13+ with higher education
education_share_secondary	share of population aged 13+ with secondary education
education_share_vocational	share of population aged 13+ with vocational education
education_share_primary	share of population aged 13+ with primary education
tourits_per_1000_persons	tourists accommodated per 1000 inhabitants