University of Warsaw

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Warsaw Econometric Challenge

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# **Summary**

This research aims to analyze the drivers of the level of COVID-19 vaccination in Poland. The research investigate the impact of various reasons on the decicion of whether or not taking the vacination from the perspective of the citizen. It asks the three main questions:

* whether the size of municipalities/cities matter.
* whether the division between eastern and western Poland makes a difference.
* Is there any variation in vaccination rates among different age groups.

1. Introduction
2. Literature review
3. Methodology
4. Data
5. Results

A graph of vaccination

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* 1. Does the size of municipalities/cities matter

The null hypothesis is that: the size of municipalities/cities matters. Alternative hypotheis is that size of municipalities/cities does not matter.

We use the variable “"area\_km2" as the prepresentative for the size of the municipalities/cities.

We perform the regression between the dependent variable "percent\_vaccinated" and "area\_km2".

Here is the summary of the result:

A screenshot of a computer screen

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Not only that, to determine the size of municipalities/cities, we also take into account the population density (total area divived by the total population)

A screenshot of a computer

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From these two above tables, it can easily be seen that the R-squareds are really low, 0.008 and 0.055, respectively. Meaning that the area variable and density variable are not be able to explain for the vaccination rate.

Not only that, we also perform the correlation test, which indicating negative correlation between the percentage vaccination and area variable, with the amount of -0.091558.

Hence, our null hypothesis is rejected. It fails to conclude that the size municipalities/cities affect the vaccination rate.

1. Conclusions