Extended Abstract
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Baby Boom or Bust?
The Case of Poland's *Rodzina 500+*

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Introduction & Research Question

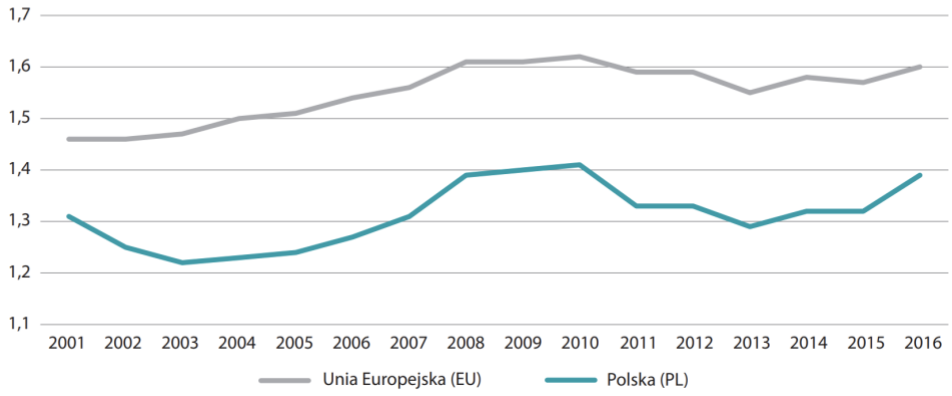
In an effort to increase one of the lowest fertility rates in the European Union (EU), the Polish government launched a child benefit program*, Rodzina 500+,* or *Family 500+* with the dual purpose of a.) boosting birth rates, and b.) combating child poverty and the intergenerational transmission of poverty. Implemented in April 2016 by the Law and Justice Party, the program offers families an untaxed, unconditional cash transfer of 500 PLN (approximately 136 USD per month as of September 2018) for every second and subsequent child. The benefit can also be granted to first children, contingent on low income eligibility (Brandt, et al.)

Poland's Total Fertility Rate (TFR) has been below 2, and thus below replacement levels, since 1990. As the figure below denotes, Poland's TFR has remained largely in step with the EU, increasing in births since 2016, with more children being born in rural than urban areas (GUS). Recent studies indicate that the *Rodzina 500+* redistributive policy has helped reduce child poverty by 3 percentage points, while costing 1.3 percent of GDP (Goras and Inchauste).

While other European countries have initiated similar programs, the Polish version is possibly the boldest, grandfathering in children under 18, while offering the highest relative subsidy. Data from Poland's Central Statistics Office (GUS) shows births have been rising since 2016 – as has the TFR across the EU – beckoning the question: *is the increased fertility rate in Poland since 2016 due to the Family 500+ policy, and more specifically, what is the effect of the cash transfer policy on socioeconomic metrics and behaviors, like financial spending and saving?*

There are many disparate variables in the socio-economic landscape to parse out in relation to the policy – an improving economy since the early 2000s (only EU country to avoid recession in 2008), high emigration, aging population structure, low age-specific birth rates, increased life expectancy, close to 90 percent Catholic identifying population, limited access to contraception and abortion, and a reluctance to accept EU migrant and refugee quotas (GUS 2018).

Wykres 31. Współczynnik dzietności w Unii Europejskiej i w Polsce
Chart 31. Total fertility rate in European Union and in Poland



Source: Central Statistics Office (GUS 2018)
https://stat.gov.pl/en/topics/population/population/demographic-situation-in-poland-up-to-2017-births-and-fertility,8,1.html

Data & Methods

Data for this study come from the Central Statistics Office (GUS) and the Polish Population Survey Data (2010–2018), restricting the sample to childbearing aged women. These sources are government agencies tasked with compiling and statistically analyzing Polish demographic data. The accessibility and richness of GUS data renders it invaluable for this study, allowing me to follow fertility metrics *vis-a-vi Rodzina 500+* over time.

I will use propensity score matching (PSM) analysis with logistic regression, as there are important differences between the apples to oranges groups of *received cash transfer* and *did not receive cash transfer* that with this method, can be converted to an apples to apples comparison. PMS is a tool most commonly used when experimental data is unavailable. The PMS method will be conducted in R, deploying the "Matching" package by Jasjeet Sekhon.

The intervention of interest is *received cash transfer* defined in reference to *did not receive cash transfer*. A propensity score-matched analysis can create comparable risk groups, with respect to demographics and TFR while controlling for a range of covariates and confounders. In my preliminary analysis, I will craft dichotomous indicators of *received cash transfer* and *did not receive cash transfer*, where the presence of the cash transfer is coded as = "1," and the absence of = "0."

The primary analysis to identify the effects of *Rodzina 500+* on TFR will use logistic regression with fixed effects. I will compute the probability of outcome for the "1" group, the control "0," and interpret the findings. I will also evaluate the policy's impact on secondary outcomes, such as financial spending and saving. Results from the multivariate logistic regression on matched samples will be also presented in table format.

References

Brandt, Nicole; Magda, Iga; Kiełczewska, Aneta (2018). "The "Family 500+" Child Allowance and Female Labour Supply in Poland." *Institute for Structural Research (ISB), Warsaw*.

Goraus, Karolina; Inchauste, Gabriela (2016). "The Distributional Impact of Taxes and Transfers in Poland." Policy Research Working Paper; No. 7787. *World Bank*.