

# Krzysztof Zaremba

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## Placement Chairs:

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## Placement Assistant:

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## Education

### Columbia University

Ph.D., Economics	Expected 2023
M.Phil., Economics	2020
M.A., Economics	2019

### Bocconi University

M.Sc., Economic and Social Sciences	2016
<i>Thesis: "Spreading of Diseases on the Sexual Networks"</i>	
<i>Supervisors: Paolo Pin and Alessa Melagaro</i>	

### Sciences Po Paris

B.A., Social Sciences	2014
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## Fields of Specialization

*Primary Field:* Health Economics

*Secondary Fields:* Applied Microeconomics, Family Economics, Networks

## Job Market Paper

### Effects of Intra-Couple Bargaining Power on the Maternal and Neonatal Health

**Abstract:** This paper provides evidence that the distribution of the bargaining power in a relationship shapes pregnancy outcomes. I measure female bargaining power with the availability of potential male partners in the local dating market. To circumvent endogeneity in the sex ratio, I use a novel instrument that leverages the randomness in sex at birth and the persistence of local demographics to isolate exogenous variation in the relative availability of men. Instrumental variables estimation shows that higher female bargaining power leads to fewer out-of-wedlock births, a lower rate of Chlamydia and Hypertension among mothers, and a lower share of infants with APGAR score below seven. These findings point to a significant contribution of the marriage market to racial disparities in pregnancy health, particularly between Black and White mothers. Black women face poor prospects when looking for a partner compared to White women: there is 102 White man per 100 White women but only 89 Black men per 100 Black women. According to my estimates, Black women's disadvantage accounts for 5-10% of the racial gap in maternal and neonatal health. Next, I use a decomposition technique to demonstrate that the racial difference in male availability is mostly policy driven, as incarceration accounts for 45% of the gap. I show with simulations that a counterfactual policy equalizing incarceration rates for non-violent offenses between Black and White people would, if one considers the sole effect on female bargaining power, still reduce health disparities by 1-4%

## Working Papers

1. [Opening of hotels and ski facilities: impact on mobility, spending, and Covid-19 outcomes](#)  
(R&R at *Health Economics*)

**Abstract:** This paper investigates how reopening hotels and ski facilities in Poland impacted tourism spending, mobility, and COVID-19 outcomes. We used administrative data from a government program that subsidizes travel to show that the policy increased the consumption of tourism services in ski resorts. By leveraging geolocation data from Facebook, we showed that ski resorts experienced a significant influx of tourists, increasing the number of local users by up to 50%. Furthermore, we confirmed an increase in the probability of meetings between pairs of users from distanced locations and users from tourist and non-tourist areas. As the policy impacted travel and gatherings, we then analyzed its effect on the diffusion of COVID-19. We found a significant association between tourist movements and the severity of a major pandemic wave in Poland. In particular, counties with ski facilities experienced more infections after the reopening. Moreover, counties strongly connected to the ski resorts during the reopening had more subsequent cases than weakly connected counties.

2. [Contribution of school and commuting networks to spreading influenza in Poland](#)

**Abstract:** Epidemics can have devastating health and economic consequences. This paper studies the diffusion of influenza-like illnesses (ILI) through social and economic networks. Using almost two decades of weekly, county-level infection and mortality data from Poland, it studies within and across-counties ILI transmission. Firstly, it evaluates the causal effect of school closures on viral transmission. The results show that closing schools for two weeks decreases the number of within county cases by 30-40%. The decline in infections extends to elderly and pre-school children. In addition, flu-related hospitalizations drop by 7.5%, and mortality related to respiratory diseases among the elderly drops by 3%. Secondly, the paper demonstrates the significant contribution of economic links to diffusion across counties. The disease follows the paths of workers commuting between home and workplace. Together with the structure of the labor mobility networks, these results highlight the central role of regional capitals in sustaining and spreading the virus.

## Work in Progress

1. [Beware of Fake Friends: Spurious Links and Peer Effects in Networks](#)

**Abstract:** This paper discusses the robustness of the widely used IV method of estimating peer effects (from Bramoullé et al., [2009]) to spurious links. Spurious links are "false positive" connections that researchers observe but which do not exist in reality. First, I show that this estimator is inconsistent when spurious links are present and can find significant peer effects even if there are none. Next, I suggest an unbiased test for the existence of peer effects and show its performance in simulations.

2. [Spreading New Habits](#)

**Abstract:** Various behaviors of economic relevance, such as condom use or hand washing, are subject to habitual practice. This paper takes into account habit formation to model the spread of new behaviors on networks. It augments traditional diffusion models with a novel insight: the probability of abandoning a new behavior decreases with the time spent practicing it. Three main results concerning interventions aiming to diffuse new behaviors stem from the augmented models. Firstly, repeated interventions are more successful at establishing new behaviors that require a long habit formation process. Secondly, there is a trade-off between the minimum number of initial adopters needed to spread the behavior and the intervention duration. Thirdly, habit formation can introduce non-monotonicities in adoption patterns in time, identifying behaviors prone to habit.

### 3. [Dashboard: Mobility in Poland During Covid-19 Pandemic](#)

An online R Shiny dashboard visualizing mobility trends in Poland during Covid-19 pandemic. It *uses Facebook* smartphone geolocation data to measure daily changes in movement patterns in the period March 2020-May 2022. Interactive visualizations explore spatial, temporal, and network aspects of mobility.

### 4. [Predicting Malpractice among New York Physicians](#)

This project utilizes machine learning techniques to predict which physicians are likely to be disciplined by the New York Medical Conduct Board. It is based on a compilation of datasets describing 140 000 physicians licensed to practice in NY and includes their characteristics, location, employment history, networks, education, and disciplinary actions. The goal of the project is to assign each physician a risk score of committing a professional misconduct.

## Professional Experience

### *Columbia University*

Research Assistant (Prof. Michael Best)	2019-2021
Research Assistant (Prof. José L. Montiel Olea)	2019
Research Assistant (Prof. Alessandra Casella)	2019

### *European Commission*

Brussels, Trainee in DataLab, DG HR	2017
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### *Bocconi University*

Research Assistant (Prof. Fernando Vega-Redondo)	2016-2017
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## Teaching Experience

### *Principles of Economics*

Teaching assistant, (with Prof. Prajit Dutta)	Fall 2018
Teaching assistant, (with Prof. Brendan O'Flaherty)	Spring 2019
Teaching assistant, (with Prof. Brendan O'Flaherty)	Spring 2020

### *Introduction to Econometrics*

Teaching assistant, (with Prof. Tamrat Gashaw)	Fall 2019
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## Honors and Awards

Dissertation Fellowship, Department of Economics, Columbia University	2022
Program for Economic Research, Columbia University, Data Purchase Grant	2020
Dean's Fellowship, Department of Economics, Columbia University	2017-2021
Summa Cum Laude, Bocconi University	2016
Bocconi Merit Award	2014-2016
Cum Laude, Sciences Po Paris	2014
Award for top student at Sciences Po Paris Dijon Campus	2012-2014

## References

**Douglas Almond** (*Sponsor*)

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**Pierre-André Chiappori**

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**Brendan O’Flaherty**

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Columbia University  
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## Miscellaneous

*Programming Languages:*

R, MATLAB, Python, SQL, Stata, Linux shell scripting

*Human Languages:*

Polish (native), English (fluent), Italian (fluent), French (fluent)

*Refereeing:*

American Journal of Health Economics, Preventative Medicine

*U.S. work authorization:*

Eligible for 3-year OPT