Utkarsh Kumar

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Personal Information	Nationality - Indian US Permanent Resident (In process)

Placement Information		
	Placement Chairs	**Administrator**
	Sandra Black sblack@columbia.edu Suresh Naidu sn2430@columbia.edu	Amy Devine (212) 854-6881 aed2152@columbia.edu

Education	**Ph.D. Economics, Columbia University**	**2018- 2024 (Expected)**
	M.A. Economics, Delhi School of Economics	**2014 - 2016**
	BA Economics, St. Stephen's College	**2011 - 2014**

Research Interests	Primary : Development Economics, Health Economics, Public Economics Secondary : Environmental Economics, Industrial Organization

Papers

Equilibrium Effects of Incentivizing Public Services (*with Parijat Lal*)
[Job Market Paper]

We study the equilibrium effects of subsidizing public services in the presence of public and private suppliers. We evaluate one of India's largest welfare schemes Janani Suraksha Yojana (JSY), which subsidized childbirth at public health institutions. We find that JSY did not improve health outcomes despite a substantial increase in take-up of institutional care. We document three equilibrium responses that likely explain this policy failure. First, JSY led to a sub-optimal distribution of risk across health facilities - high risk and poor mothers sorted out of highest quality care at private facilities. Second, in line with the literature, public sector quality deteriorated as a result of congestion. This resulted in lower quality care for both marginal as well as infra-marginal patients at public hospitals. Third, despite increased competition, private hospitals increased prices without improvements in healthcare quality, further crowding out riskier and poorer mothers. These findings emphasise the need for complementary public policies in addition to JSY - capacity improvements at public facilities and targeted vouchers to poorer mothers to access healthcare at private facilities.

Electric stoves as a solution for indoor air pollution: Evidence from Rural India (*with E. Somanathan, Marc Jeuland, Eshita Gupta, T.V. Ninan, Rachit Kamdar, Vidisha Chowdhury, Suvir Chandna, Michael Bergin, Karoline Barkjohn, Christina Norris, T. Robert Fetter, Subhrendu Pattanayak*)

We collected minute-by-minute data on electricity availability, electric induction stove use, and kitchen and outdoor particulate pollution in a sample of rural Indian households for one year.

Using within household-month variation generated by unpredictable outages, we estimate the effects of electricity availability and electric induction stove use on kitchen PM2.5 concentration at each hour of the day. Electricity availability reduces kitchen PM2.5 by up to 50 $\mu g/m^3$, which is between 10 and 20 percent of peak concentrations during cooking hours. Induction stove use instrumented by electricity availability reduces PM2.5 in kitchens by 200-450 $\mu g/m^3$ during cooking hours.

Infrastructure resilience against environmental shocks and economic effects of transport disruptions: Evidence from India

(*Vickrey award for best third year paper (runner-up), Columbia University*)

I establish a causal link between the practice of crop-residue burning in India on disruptions in transport infrastructure using three independent causal inference techniques. I show that crop-residue burning gives rise to high volumes of particulate pollution, which combined with India's humid climate creates dense layers of smog. This smog not only affects peoples' health, but also affects India's entire transport infrastructure due to reduced visibility. As a result, rural workers' monthly savings decline as they switch to private modes of transport and buy more fuel.

Can large scale conditional cash transfers resolve the fertility-sex ratio tradeoff? Evidence from India

Currently, there are at least 15 conditional cash transfer schemes in India that aim to correct persisting gender inequalities arising out of a preference for sons in Indian families. Despite huge financial resources being pumped into these schemes, there is a lack of field-level monitoring and useful redressal mechanisms which make their impact un-clear. I evaluate a conditional cash transfer (CCT) scheme called Ladli Laxmi Yojana in Madhya Pradesh, India. I find financial incentives aimed at the girl child increased average fertility by about 0.157 children per couple and improved sex-ratio by about 0.034 points pointing to the well known fertility-sex ratio trade-off. These effects are quite opposite to a similar CCT scheme in Haryana (Anukriti 2018) suggesting context/path dependence of these policies.

Policy Work

Determinants and Social Dividends of Digital Adoption (*with Mariano Moszoro and David Amaglobeli*) (*published as an IMF Working Paper*)

We identify key drivers of digital adoption, estimate fiscal costs to provide internet subsidies to households, and calculate social dividends from digital adoption. Using cross-country panel regressions and machine learning we find that digital infrastructure coverage, internet price, and usability are the most statistically robust predictors of internet use in the short-run. Based on estimates from a model of demand for internet we find that demand is most price responsive in low-income developing countries and almost unresponsive in advanced economies. We estimate that moving low-income and emerging market economies to the level of digital adoption in emerging and advanced economies, respectively, will require annual targeted subsidies of 1.8 and 0.05 percent of GDP, respectively. To aid with subsidy targeting, we use micro-data from over 150 countries and document a digital divide on gender, socio-economic status, and demographics. Finally, we estimate the monetized benefits of internet use on education quality as well as time spent doing unpaid work and labor force participation by gender. Our calculations suggest substantial aggregate and distributional gains from digital adoption. Moving low-income and emerging market economies to the level of digital adoption in emerging and advanced

economies, respectively, improves education quality substantially and increases labor-force participation equivalent to 1.8 percent of GDP, largely driven by women.

In Progress

Politics and public sector productivity (*with Shreya Chandra*)
(*Analysis stage*)

There has been a longstanding debate on the role of public sector firms in economic development. We conduct an empirical investigation of the classical theoretical claim that public sector firms are often captured by political interests (Shleifer and Vishny 1994). We study the case of Indian railways - one of the world's largest public sector firms. Our empirical strategy combines rich election data with a novel output-based measure of productivity - namely train delays. We have web-scraped travel times for millions of trips across the Indian railway network. Using closely contested elections as a source of plausibly random changes in political leaders across Indian constituencies, we plan to test whether (and how) politicians affect the operations of Indian railways.

Household sorting and willingness to pay for spatially concentrated environmental dis-amenities: A case of Delhi's trash mountains (*with Shreya Chandra*)
(*Data collection in progress*)

Absent adequate urban planning, accelerated urbanization in developing countries can have severe consequences. Lack of waste management in India has resulted in huge trash mountains in major urban areas including Delhi. These overflowing landfill sites disproportionately affect the urban poor. Recent policy debates in Delhi have highlighted lack of public investment in cleaning up trash mountains. But how much should the government invest in clearing up trash mountains? This project aims to build a city-level willingness-to-pay measure using an urban spatial equilibrium model. Using granular data from the Indian census, we aim to calibrate an urban model for Delhi and evaluate welfare improvements from counterfactual removal of three major trash mountains. Monetized value of overall welfare gains will provide a measure of city-level willingness-to-pay to remove Delhi's trash mountains.

Scholarships and Grants

Dissertation Fellowship, Columbia University	2022-2023
PER Summer Research Grant, Columbia University	2021, 2022
CDEP Research Grant, Columbia University	2022
Program for Economic Research (PER) Data Grant, Columbia University	2022
PER Experimental Grant, Columbia University (*with Palaash Bhargava*)	2022
Diversity Fellowship, UC Berkeley (*with Shreya Chandra*)	2022
Vickrey Award for Best 3rd Year Paper, *Runners up*, Columbia University	2021
Weiss Fund Development Economics Grant, UChicago (*with Parijat Lal*)	2021
Economist for Equity Research Grant, UC Berkeley (*with Shreya Chandra*)	2021
Dean's Fellowship, Columbia University	2018 - 2023
Academic Merit Scholarship, Delhi School of Economics	2016
Suresh Lal Bhandari Prize, St. Stephen's College	2014

Workshops

Referee, Young Economist Symposium	2021
Centro Studi Luca d'Agliano Summer School	2021
Sloan/Berkeley Energy and Environment Summer School	2021

Conference Presentations	IPWSD, Columbia University	2020
Work Experience	Fund Internship Program, International Monetary Fund	Jun - Aug 2022
	RA for Gautam Gowrisankaran, Columbia University	Spring 2022
	RA for W. Bentley MacLeod, Columbia University	Fall 2019
	RA for Eswaran Somanathan, Indian Statistical Institute	2017-2018
	High School Teacher, Isha Home School	2016-2017
Teaching Experience	Principles of Economics (Undergraduate), Columbia University	Fall 2021
	Industrial Organization (Instructor), Columbia University	Summer 2021
	Econometrics (Masters), Columbia University	Spring 2021
	Principles of Economics (Undergraduate), Columbia University	Fall 2020
	Industrial Organization (Instructor), Columbia University	Summer 2020
	Econometrics (Masters), Columbia University	Spring 2020
Technical Skills	Stata, R, Matlab, Python, Julia (*basic*)	
Languages Known	English, Hindi	
Non-academic interests	Former professional squash player, UC Berkeley Men's squash team coach (2022-2023), violinist, high-altitude mountaineering, tennis	

References

Eric Verhoogen (*Chair*)
Professor of Economics
Columbia University

Gautam Gowrisankaran
Professor of Economics
Columbia University

Jack Willis
Assistant Professor of Economics
Columbia University