ABHISHEK DESHWAL

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EDUCATION

Columbia University — New York, NY
Ph.D. Sustainable Development — 2021 to 2027 (expected)

Tata Institute of Social Sciences — Mumbai, INDIA
Master of Arts, Development Studies — 2018

St Stephen's College — Delhi, INDIA
Bachelor of Science, Physics honors — 2016

FIELDS

Industrial Organization; Energy & Environmental Economics; Development Economics

EMPLOYMENT

World Bank Group, Consultant — May '23 - Aug '23
Project: Informational Interventions and Energy-Efficient Technology Adoption

- Conducted econometric analysis of randomized experiment testing the impact of information interventions on 506 leather goods firms in Dhaka
- Applied difference-in-differences with multiple treatment arms and instrumental variable techniques to identify causal effects on energy consumption and demand for servo motors

Abdul Latif Jameel Poverty Action Lab, Senior Research Associate — May '18 - May '21
Project: ***Does Serving the Poor Cause Corruption*** *(with Nicholas Ryan & Prabhat Barnwal)*

- Designed and implemented randomized electrification experiment across 413 villages (40k households); led team of enumerators through 3 data collection waves to construct a repeated cross-section of 7000 households
- Conducted econometric analysis to quantify treatment effect on connection take-up and corruption; estimated demand for electricity using multinomial logit for welfare analysis

Project: ***Beneficial Selection in Subsidy Reform*** *(with Nicholas Ryan & Anant Sudarshan)*

- Designed a subsidy reform pilot for agricultural consumers using administrative utility data (3M+ consumers); led the randomization design for rollout across 3 Indian states
- Estimated equilibrium demand model under electricity supply rationing to quantify advantageous selection effects. Found that 22.8% take-up achieved 44% of water savings from mandatory enrollment, with 80% water savings among participants

WORKING PAPERS

Title: ***When Is Correcting Misallocation Better Environmental Policy than Carbon Pricing? Evidence from India's Distorted Electricity Industry***

Abstract: Optimal climate policy such as carbon pricing works by efficiently reallocating production to reflect social costs. However, in many developing countries, there is widespread misallocation in production - preexisting tax wedges systematically burden the most productive firms while protecting less efficient ones. When these productive firms also have lower emissions, carbon taxes create a fundamental allocation problem: they may preserve production from dirty, inefficient incumbents while accelerating the exit of clean, efficient producers. This paper demonstrates that when distortions are negatively correlated with marginal emissions across producers, removing preexisting sources of misallocation can deliver larger emissions reductions than carbon taxes themselves. I apply this theoretical insight to India's electricity generation industry, where administrative coal allocation creates a $4 billion annual misallocation by granting inefficient, high-emission state-owned plants preferential access to subsidized coal while forcing efficient, clean private generators to pay market prices. I build a structural model of electricity generation to show that removing these distortions achieves CO_2 reductions equivalent to a $40/ton carbon tax while generating welfare gains 2.4 times larger. Distortion removal reallocates 20% of production from the dirtiest to cleanest plants, while a $20/ton carbon tax applied to the distorted system achieves only 2.5% reallocation. Moreover, at every tax rate from $20-100/ton, carbon taxes would be 130-270% more effective if underlying distortions were removed first, representing $3.8 billion in additional annual climate

damages. These findings suggest that in heavily distorted economies with weak regulation, efficiency-enhancing reforms can serve as environmental policy itself, offering a more feasible path than traditional climate policies.

Title: ***From Static to Dynamic Misallocation: How Government-created Distortions Shape Long-run Productivity Growth (****with Tianyu Luo****)***
Abstract: We study how government-created distortions in upstream coal markets affect long-run productivity growth in India's electricity industry. The government coal monopoly administratively allocates subsidized coal primarily to inefficient state-owned plants while forcing efficient private generators to purchase coal at market prices often 1.5-2 times higher. Using plant-level data for 2006-2017 and detailed administrative records of coal supply contracts, we measure productivity and distortions directly, avoiding empirical challenges associated with production function estimation. Coal policy changes reduced expected subsidized coal access for private generators from 90% to 38% during this period of substantial private entry. We estimate a dynamic oligopoly model for coal-fired generators that recovers firms' beliefs about future coal availability and quantify how these distortions affected investment decisions. Preliminary findings suggest that removing these distortions affects long-run productivity growth through two distinct mechanisms: (i) direct reallocation from subsidized inefficient state plants to unsubsidized efficient private plants, and (ii) increased investment by efficient private generators responding to improved expected profitability. Together, coal price deregulation would significantly alter the long-run distribution of productivity and aggregate industry outcomes.

PAPERS IN PROGRESS

Agriculture Price Support Policies and Climate Adaptation
Public versus Private Infrastructure: the Case of Universal 24x7 Tap Water Supply in Odisha *(with Michael Kremer and Jack Willis*)
Can Non-Price Interventions to manage Demand Accelerate Renewable Integration? *(with Bhavya Srivastava*)

TEACHING

Microeconomics and Public Policy (Graduate), TA for Jan Svejnar, Columbia University	Fall 2025
Principles of Economics, TA for Waseem Noor, Columbia University	Spring 2025
Microeconomics and Public Policy (Graduate), TA for Ingmar Nyman, Columbia University	Fall 2022, 2023, 2024
Globalization and Its Risks, TA for Graciela Chichilnisky, Columbia University	Spring 2024
Principles of Economics, TA for Sunil Gulati, Columbia University	Spring 2023

FELLOWSHIPS & AWARDS

Dean's Fellowship, Columbia University	2021-2026
Center for Development Economics and Policy Student Research Grant	2024
STEG Small Research Grant (SRG), 2024	2024
Best Student, Tata Institute of Social Sciences, Mumbai	2017
Second best paper, Pangaea 2017, Tata Institute of Social Sciences, Mumbai	2017
INSPIRE Scholarship (full college tuition) - top 1% in India Board Exams	2013
CBSE Certificate of Merit in Physics - top 0.1% nationally	2013

LEADERSHIP

President, Columbia Tango Club May '24-Present
- Boosted membership by 30% by implementing targeted social media campaigns and restructuring beginner workshops to improve retention rates

Vice President, Sustainable Development Doctoral Society Sep '23-Sep '24
- Secured $5000 (33%) in additional funding for Columbia's premier PhD research conference (IPWSD), increasing sessions by 25% and sponsoring participant travel from less well funded institutions

LANGUAGES

Hindi (native); English (fluent); Spanish (beginner)

SOFTWARE SKILLS	Python (pandas, scikit-learn, tensorflow, Gurobi, CVX), Stata, R, Google Earth Engine
PERSONAL	Advanced Tango dancer, expert chef specializing in regional Indian cuisine Extensive travel in Europe (France, Germany, Spain, Portugal, Austria, Italy, Greece), the U.S. and India