ANNA DAVID THOTTAPPILLY

A6 425 ESB2, IIT Kanpur, India 208016
annat@iitk.ac.in — +91 5122592493
https://annathottappilly.github.io/

EMPLOYMENT

Assistant Professor, Department of Economic Sciences, IIT Kanpur	2023-present
Assistant Professor, University of Delhi	Sept 2016 - June 2017
Assistant Professor, University of Calicut	Mar 2016 - Aug 2016

EDUCATION

Ph.D., Applied Economics and Management, Cornell University	2023
M.S., Applied Economics and Management, Cornell University	2020
M.A., Economics, Jawaharlal Nehru University	2014
B.A. (Honours), Economics, St. Stephen's College, University of Delhi	2012

RESEARCH INTERESTS

Fields: Agriculture Economics, Climate Change, Health & Nutrition

RESEARCH PAPERS

Fertilization Impact of Carbon Dioxide: Does Carbon Dioxide Increase Agricultural Yield (Anna David Thottappilly)

This study examines the impact of atmospheric carbon dioxide (CO_2) on yield of the two main staple crops of India, viz. wheat and rice. Using rich remote sensing data on atmospheric pollutants, and overcoming simultaneity by controlling for plant cover, the paper finds a positive effect of CO_2 on wheat yield. It also identifies a positive effect on rice yield, conditional on the quality of the cultivar of the crop. This paper contributes to the climate change literature where hitherto studies have focused on the effect of increasing temperature and erratic precipitation on yield. This is the first study in the Indian context to identify the effect of CO_2 on agriculture yield.

Are Production and Consumption Decisions Independent? Identifying Separability in Indian Agriculture (Anna David Thottappilly, Prabhu L. Pingali & Mark A. Constas)

This paper proposes that under separable production and consumption, farm revenue from the sale of crops is independent of household characteristics such as land and labor endowment, and use this as a test for separability. Analyzing a panel of 960 households in Chandrapur district of India, our fixed effects model reveal a positive correlation between land ownership and farm revenue, controlling for confounding variables. Land and labor endowments are positively correlated with farm revenue for small and marginal land-owning households and for those growing food crops. Thus, we show that there is a breakdown of separability between production and consumption.

Mitigating Food Insecurity and Climate Change with Digital Agriculture (Vanisha Sharma, Shree Saha, Anna David Thottappilly & Prabhu L. Pingali)

Through an in-depth review of empirical studies, case examples, and emerging trends, this review paper seeks to underscore the transformative potential of digital agriculture in promoting sustainable food systems. We examine the convergence of technological innovation, data analytics, and agricultural practices to elucidate how digital agriculture unfolds two major pathways towards sustainability, i.e. food security and climate change.

RESEARCH IN PROGRESS

Digitization and Agricultural Credit Use: Evidence from India (Anna David Thottappilly)

This paper examines the effect expansion of mobile internet has on the agricultural credit uptake in India. I use the launch of the Jio sim in 2016 in India as an instrumental variable to test for the causal relationship between digitization and credit use. The extremely low price at which internet data was provided by Jio substantially increased access to internet, specially for the rural population. I hypothesize an increase in credit use due to the increase in internet access.

Effects of nutritional intervention on anemia and cognitive development among pre-school children: Field experiments in India (Santosh Kumar & Anna David Thottappilly)

Iron deficiency anemia is widespread and is a global health challenge that undermines the physical as well as cognitive development of children. The proposed study will implement a field experiment among 3-5 years old preschoolers in rural Bihar, India. The study team randomly assigns 50 schools to the treatment groups that will receive fortified lunch (micronutrient mixed lunch) and 50 schools serves as control groups. The preschool children in this experiment are recruited from the Anganwadi Centers (AWC). AWCs, which are the community-based lowest tier of health service delivery, provide primary medical care and nutritional services to infants and their mothers in the community. Our hypothesis is that the proposed intervention will decrease anemia and improve test scores, and cognitive and executive functions. The findings will inform policies about the optimal timing of micronutrient supplementation and will demonstrate the effectiveness of AWC as the delivery platform for nutritional interventions.

OTHER WRITING

Cash to Mouth: Exploring the Income Pathway to Improved Nutrition, published April 2020

CONFERENCE PRESENTATIONS

2024: ICAE 2024, *International Association of Agricultural Economists*; EAERE 2024, *KU Leuven*

2022: Jobs, Innovation and Value Chains in the age of Climate Change, *IFAD, Rome*

2021: ICAE 2021, *International Association of Agricultural Economists*

PROFESSIONAL SERVICE

Referee: *Economic Modelling*

TEACHING EXPERIENCE

IIT Kanpur

Instructor, ECO111 - Economy, Society & Public Policy (Undergraduate)	July 2024 - Dec 2024
Instructor, ECO 718 - Agricultural Economics (Graduate)	Jan 2024 - May 2024 (3.80/4.00)
Tutor, ECO211 - Microeconomics I (Undergraduate)	July 2023 - Dec 2023 (3.38/4.00)

Cornell University

Teaching Assistant, AEM5600 - Managerial Economics (Graduate)	Fall 2022 (4.80/5.00)
Teaching Assistant, AEM6992 - Research & Methoods (Graduate)	Spring 2019
Teaching Assistant, AEM2660 - Managerial Economics I (Undergraduate)	Fall 2019 (4.60/5.00)

University of Delhi

Instructor, Introductory Econometrics (Undergraduate)	Jan 2017 - June 2017
Instructor, Introductory Microeconomics (Undergraduate)	Sept 2016 - Dec 2016

University of Calicut

Instructor, Econometrics I (Graduate)	March 2016 - Aug 2016
Instructor, International Economics (Undergraduate)	March 2016 - Aug 2016

AWARDS & GRANTS

ICAE Conference Grant ($120)	2024
EAERE Conference Grant ($1100)	2024
Tata-Cornell Scholar ($35,000 p.a)	2018 - 2023
Junior Research Fellowship, University Grants Commission, India ($3500 p.a)	2015 - 2017

TECHNICAL SKILLS

STATA, R, Python, Microsoft Office, LaTeX, Remote sensing data analysis, ArcGIS

REFERENCES

Prabhu L. Pingali
Director, Tata-Cornell Institute
Professor of Applied Economics & Policy
Charles H. Dyson School of Applied Economics & Management
Cornell University
plp39@cornell.edu

Mark A. Constas
Professor of Applied Economics & Policy
Charles H. Dyson School of Applied Economics & Management
Cornell University
mark.constas@cornell.edu

David E. Sahn
International Professor of Economics, and Director
Department of Economics, and Cornell University Food and Nutrition Policy Program (CFNPP),
Division of Nutritional Sciences
Cornell University
david.sahn@cornell.edu