

## **ARANYA CHAKRABORTY**

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### **EDUCATION**

Ph.D. Economics, McGill University, expected 2023  
M.Sc. Economics, University of Calcutta, 2016  
B.Sc. Economics (Honours), R.K.M.R College Narendrapur, 2014

### **FIELDS OF SPECIALIZATION**

Primary: Development Economics  
Secondary: Applied Microeconomics

### **DISSERTATION**

*Learning and Technology Adoption in Developing Countries*

Committee: Prof. Sonia Laszlo (Chair), Prof. Matthieu Chemin, Prof. Francesco Amodio

### **JOB MARKET PAPER**

[“Optimal Network-Based Targeting for Technology Adoption in Developing Countries”](#)

How do we use existing social ties to improve the adoption of a new technology? I explore optimal network-based targeting when the expected benefit associated with the new technology varies at the household level. In particular, I focus on two types of targeting: targeting households central to the network and targeting based on the likelihood of adoption. I develop a theoretical framework where initially uninformed agents engage in DeGroot learning to decide whether or not to get fully informed about a new technology. Conditional on being fully informed, they then decide whether or not to adopt the new technology. The model predicts the possibility of low information equilibria where nobody will adopt the new technology even if it's efficient for some of them to do so, and targeting is needed. My simulations suggest that the optimal targeting strategy in such a scenario relies on the underlying heterogeneity in the population. If heterogeneity is high in terms of the applicability of the new technology, targeting based on the likelihood of adoption performs better than centrality-based targeting. Conversely, centrality-based targeting works better if the population is more homogeneous. I test these predictions using data from Malawi and provide evidence supporting my theoretical model. I argue that population heterogeneity in benefits from a technology matters for the success or failure of alternative targeting strategies that promote that technology.

### **OTHER RESEARCH PAPERS**

[“The Role of Experience in Learning for Index Insurance Products: Evidence from Rural Kenya,”](#) Working Paper.

“Beliefs about Uncertain Technologies: Experimental Evidence from a Coordination Game in Peru,” Work in Progress, with Jim Engle-Warnick, Javier Escobal, and Sonia Laszlo

“Assessing the Impact of Judicial Independence in Developing Countries: Evidence from Rural Bangladesh,” Work in Progress, with Matthieu Chemin

“[Food Insecurity, Price Volatility and Trade: A Panel Data Analysis in Developing Countries](#),” published as Chapter-10 in *Indian Agriculture under Multilateral and Regional Trade Agreements - Competitiveness and Food Security*, Sharma and Bathla (eds.), Bookwell, Delhi, 2017, 177-194, with Panchanan Das and Swayambhu Mukherjee

“[Industrial Performance in West Bengal: Analysis of Technical Efficiency with ASI Data](#),” Working Paper, 2016, with Panchanan Das and Swayambhu Mukherjee

## TEACHING EXPERIENCE

Teaching Assistant, Economic Development 1, McGill University, Winter 2021-22 & Fall 2021  
Teaching Assistant, Economic Development 2, McGill University, Winter 2019-20 & Winter 2022  
Teaching Assistant, Topics in Economic Development 2, McGill University, Winter 2021  
Teaching Assistant, Income Distribution, McGill University, Winter 2021 & Fall 2021  
Teaching Assistant, Industrial Organization, McGill University, Fall 2019  
Teaching Assistant, Microeconomic Theory, McGill University, Fall 2018  
Teaching Assistant, Economic Statistics, McGill University, Winter 2018  
Teaching Assistant, Intro to Behavioral Economics, McGill University, Fall 2017 & Fall 2020

## RESEARCH AND RELEVANT WORK EXPERIENCE

Research Assistant, Prof. Sonia Laszlo, Summer 2020

## GRANTS AND AWARDS

Graduate Excellence Award, McGill University, 2017-2021  
Doctoral Fellowship, McGill University, 2018-2021  
McCall MacBain Fellowship, McGill University, 2019  
Prof. D. Datta Memorial Prize for First Class (First Position) in Economic Honours, R.K.M.R College Narendrapur, 2014

## CONFERENCE AND SEMINAR PRESENTATIONS

Annual Meeting of the Canadian Economic Association, 2022  
17<sup>th</sup> CIREQ PhD Students' Conference, 2022  
CIREQ Lunch Seminars, 2022  
Conference on WTO, Trade and Agriculture organized by CWS-IIFT, 2015

## PROFESSIONAL SERVICE

Organizer of Applied Micro Breakfast, Dept. of Economics, McGill University, 2020-2021  
Chair for the session on Technology, Development, and Inequality in CEA-CDESG Annual Meeting, 2022

## LANGUAGES

Bengali (native), Hindi (native), English (fluent)

## COMPUTATIONAL SKILLS

Stata, R, Python, EViews, Matlab

## REFERENCES

Prof. Sonia Laszlo	McGill University	<a href="mailto:sonia.laszlo@mcgill.ca">sonia.laszlo@mcgill.ca</a>	(514) 398-2102
Prof. Matthieu Chemin	McGill University	<a href="mailto:matthieu.chemin@mcgill.ca">matthieu.chemin@mcgill.ca</a>	(514) 398-5077
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