

# SUDIPTA GHOSH

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## Profile

- PhD Candidate in Economics, 10+ years of experience in Econometric & Computational Methods
- Experienced in Data Science, Machine Learning, reduced form and structural methods

## Education

PhD in Economics, UBC	Summer 2025 (Expected)
<ul style="list-style-type: none"><li>• Macroeconomics, International Trade, Labor Economics</li><li>• Best summer paper award winner (2022)</li><li>• Won Center for Innovative Data Research Grant (CIDER, 2024, \$11,000)</li><li>• References: <a href="#">Dr. Amartya Lahiri</a>, <a href="#">Dr. Michael Devereux</a>, <a href="#">Dr. Gorkem Bostanci</a></li></ul>	
MSc Economics, IGDR, India	2009-2012
BSc Economics (Hons), Presidency College, India	2012-2014

## Technical Skills

Programming: Python (Pandas, NumPy, etc.), R, Stata, Julia, MATLAB, SQL  
Databases: Neilson Scanner, DataStream, Bloomberg, Survey Data, I/O Tables, Time Series  
Analytics: Diff-in-Diff, Event Studies, Instrumental Variables, Regression Discontinuity, Discrete Choice Models, Causal Machine Learning, A/B testing, Time series analysis,

## Work Experience

Teaching Assistant	2020-Present
<ul style="list-style-type: none"><li>• TA for more than 7 courses, with more than 90% favorable reviews</li><li>• Taught both theoretical and analytical courses with emphasis on econometrics, coding and applied methods</li></ul>	
Research Assistant to Prof Amartya Lahiri	2020-Present
<ul style="list-style-type: none"><li>• Drafted in-depth economics research literature reviews.</li><li>• Build theoretical models and calibrated them using estimation techniques like GMM, ML</li></ul>	
Research Associate, Reserve Bank of India (CAFRAL)	2017-2019
<ul style="list-style-type: none"><li>• Assisted the Monetary Policy Committee, Reserve Bank of India, in policy research and data management</li><li>• Developed and maintained a web scraping algorithm for scraping daily online prices from various retail e-commerce websites using Python and developed urban daily CPI for 4 Indian cities</li><li>• Using confidential corporate funding data (+200K firms) analyzed the rise of corporate funding by non-bank credits in the rising NPA scenario in India.</li></ul>	
Senior Economic Research Associate, S&P Global	2014-2017
<ul style="list-style-type: none"><li>• Managed a team of 4 members to develop high end macro-forecast models for leading Asset Management Firm.</li><li>• Developed a Sign Restricted Bayesian SVAR Model and decomposed the impact of historical structural economic shocks on asset price variables.</li><li>• Programmed a dynamic Now-casting model for GDP and Inflation in developed economies using 400+ macro variables and sentiment indicators and techniques like PCA, dynamic factor modeling and Kalman Filter.</li></ul>	

- Developed a model for Term Premia Estimation for USA, with data on Treasury Yields for horizons from 1 month to 10 years using a 3-step estimation process on five factors generated by PCA on the continuous treasury Yields data.
- Programmed an auto-updating recession probability model for the USA using Probit models for 3, 6, 12, 18 and 24 months ahead horizons.

## Working papers

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- **Remeasuring welfare gains from trade with endogenous production network (JMP)**
  - Constructed a theoretical multi-sector general equilibrium model of endogenous firm-to-firm trade
  - Used Input-output Tables and USA Tariff data to construct industry level trade shocks
  - Calibrated the model parameters using Simulated Method of Moments to replicate USA trade statistics.
  - Simulated a synthetic production network for the USA to mimic US firms' indegree distribution
  - Quantitatively estimated welfare changes and trade elasticities with endogenous production networks
- **Labor outsourcing across countries with Gorkem Bostanci**
  - Collated cross-country information on employment, output and other measures to present stylized facts on heterogeneity in labor outsourcing
  - Calibrated a model for firms' labor choice to determine optimal outsourcing
- **Heterogeneous Firm Sorting and Monopsony Power with Xiaojun Guan and Jan Rosa**
  - Built a spatial equilibrium model integrating methods from Industrial Organization (IO) and Game Theory to disentangle the effect of firm location choice on urban wage premiums
  - Currently estimating the model using two administrative panel datasets of firms and workers in Germany
- **Productivity, Size and Market Competition, with Amartya Lahiri and Swapnika Rachapalli**
  - Used Annual Survey of Industries, India data and tariff information to depict differentiated patterns in firm size and productivity correlations among exporters and non-exporters
  - Employed fixed effects (FE) and instrumental variable (IV) techniques to assess the causal effects of tariff changes on firm size and productivity

## Publications (Pre-doc)

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- **Central Bank Equity and Analytics, with S. Bandyopadhyay, R. Devnani & A. Lahiri**  
Indian Economic Review, pp.255-279, 2021
- **Rural-Urban Disparities in India in the Time of Growth, with V. Hnatkovska, & A. Lahiri**  
Indian Public Forum, pp.219-265, 2020

## Grants, Awards and Fellowships

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| • Best Summer Research Paper Award, UBC  | 2022         |
| • President's Excellence Award, UBC      | 2019-Present |
| • International Tuition Award, UBC       | 2019-2024    |
| • Graduate Student Fellowship, UBC       | 2019-2024    |
| • Best Employee Award, S&P Global        | 2016         |
| • Best Team Innovation Award, S&P Global | 2015         |

## Conferences and Presentations

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| ❖ 5 <sup>th</sup> International Conference on European Studies, Zurich (Selected) | 2023 |
| ❖ 93 <sup>rd</sup> SED Meetings, Louisiana, USA                                   | 2023 |
| ❖ 58 <sup>th</sup> CEA Meetings, Toronto, Canada                                  | 2024 |