

Suraj Kumar

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RESEARCH INTERESTS

Macroeconomics, Finance, Time-series Econometrics, Machine Learning

EDUCATION

Delhi School of Economics, M.A. Economics, Marks: 68.07% May 2018
Indian Institute of Technology Delhi, B.Tech in Civil Engineering, C.G.P.A.: 7.23/10 May 2014

NON-ACADEMIC/MARKET RESEARCH PUBLICATIONS

Discovering India's Potential, Asia Economics Analyst (with Santanu Sengupta) August, 2022
• Methods: World Bank's Long Term Growth Model (based on Solow-Swan growth Model)
• Findings: With improved participation and investment rate, India has potential to grow at 6.7 % for next decade.
How does the RBI respond to elevated inflation in a Fed hiking cycle, Asia Economics Analyst (with Santanu Sengupta)
• Methods: Linear regression, Output gap estimation (HP Filter) May, 2022
• Findings: RBI increase policy rate more in response to higher inflation (+25bp) than to output gap(+8bp).
Higher for longer: India's inflation outlook post supply shock, Asia Economics Analyst (with Santanu Sengupta)
• Methods: Linear regression March, 2022
• Findings: The RBI headline inflation forecast in 2022 is based on very benign food and oil price assumptions.
What drives India's exports?, Asia Economics Analyst (with Santanu Sengupta) December, 2021
• Methods: Linear regression
• Findings: India's real exports growth more elastic to trading partners GDP growth compared to change in REER.

RESEARCH EXPERIENCE

Research Associate – Dr. Udupa, Prof. Chatterjee and Prof. Rajeshwari September 2022 - Present
Centre for Advanced Financial Research and Learning, Reserve Bank of India, Mumbai, India

Does trade impact core inflation dynamics? December 2022 - Present
• Methods: Local projections; Data: Indian states X inflation category (core/food/fuel) X months
• Preliminary findings: States which trade more compared to other states have lower pass-through of food and fuel shocks to core inflation.

The political economy of fiscal dominance September 2022 - Present
• Methods: Local projections; Data: 15 Emerging market countries macro and political constraints data
• Preliminary findings: Monetary policy reacts more to inflation shocks in a high-politically constrained regime compared to a low-politically constrained regime.

WORK EXPERIENCE



Analyst – Global Investment Research June 2020 - August 2022
Goldman Sachs, Mumbai, India

- Contributed to writing thematic reports, conducted econometric analysis on short-term and medium-term drivers of inflation, the RBI's reaction function, determinants of India trade deficit, and fiscal balance.
- Published regular comments and provided forecast on India's macro data releases:- inflation, growth, industrial production, the RBI policy rate, trade and fiscal balance. Published weekly and monthly tracker of economic indicators and COVID-19.
- Constructed proprietary *GS India Consumption and Investment indices* using PCA, and devised *GS India stringency index* from lockdown policies of 10 key states.



Analyst – Machine Learning Model Developer January 2019 - March 2020
American Express India Limited, Gurugram, India

- Made big data ML models using AXGBoost to predict credit card spend of prospective US customers.
- Implemented telemarketing Net Response Rate (NRR) model in production by using SQL and Linux shell scripts.

Analyst – Model Risk Management July 2018 - December 2018
Credit Suisse, Mumbai, India

- Validated the EMEA debt capital market revenue model.  [R Notebook Code](#)
- Coded in R the convertible callable bond pricing algorithm,
- Programmed in R to run and evaluate multiple linear regression models at once.  [R Code](#)

HONORS AND AWARDS

- Manmohan Singh Fellowship (1 DSE entering graduate for topping entrance examination annually) 2016-17
- Institute rank 2 in a data science competition: *American Express Analyze This 2017*  [Github Repository](#)
- Institute rank 1 in a optimal portfolio competition: *Credit Suisse FinStats 2017*  [Github Repository](#)

COURSE PROJECTS

Programmed Two State - One Control Bellman Equation Model in Lucas Asset Pricing Economy  [Jupyter Notebook](#)

TECHNICAL SKILLS

Computer Programming: Fluent in Stata and R; experience in Python and SQL
Data Analysis Tools: Excel, Eviews, MATLAB, ArcGIS