Kosha Modi

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Education

Columbia University in the City of New York 2019-2025
Ph.D. Economics *(expected)*

Indian Statistical Institute, New Delhi 2015-2017
Masters in Quantitative Economics *Rank 2*

Presidency University, Kolkata 2012-2015
B.Sc. in Economics *Rank 1*

Research Fields

Macro-Finance, Monetary Economics

Working Papers

The Perceived Sources of Unexpected Inflation *(Job Market Paper)*
joint with Emilio Zaratiegui

We propose a new methodology to decompose the sources of unexpected inflation into demand, supply and monetary shock components. We study high frequency asset price changes around Consumer Price Index announcements in the US to document several new facts. An unexpected increase in the CPI inflation leads to (a) an increase in the breakeven inflation rates (b) an increase in treasury nominal yields and (c) a decrease in treasury real yields on an average. We interpret these facts through the lens of a New Keynesian Model with dispersed information to find that all the three shocks: demand, supply and monetary, contributed substantially to inflation surprises between 2004-2022.

Anatomy of Banks' IT Investments: Drivers and Implications
with Nicola Pierri, Yannick Timmer, and María Soledad Martínez Pería

This paper relies on administrative data to study determinants and implications of US banks' Information Technology (IT) investments, which have increased six-fold over two decades. Large and small banks had similar IT expenses a decade ago. Since then, large banks sharply increased their spending, especially those which were more exposed to competition from fintech lenders. Other local-level and bank-level factors, such as county income and bank income sources, also contribute to explain the heterogeneity in IT investments. Analysis of the mortgage market reveals that fintechs' lending behavior is more similar to that of non-bank financial intermediaries rather than IT-savvy banks, suggesting that factors other than technology are responsible for the differences between banks and other lenders. However, both IT-savvy banks and fintech lend to lower income borrowers, pointing towards benefits for financial inclusion from higher IT adoption. Banks' IT investments are also shown to matter for the responsiveness of bank lending to monetary policy.

Loan Covenants and the Firm Investment Channel of Monetary Policy

We study the role of loan-level financial covenants in determining the investment channel of monetary policy. We find that out of all covenant-types, the minimum interest coverage covenant, which sets a minimum ratio of earnings to interest payments, interacts robustly with monetary shocks. When there is a positive monetary shock, the farther away a firm is from violating its interest coverage threshold, the more responsive it is to a monetary shock in terms of investment. This finding is robust to controlling for factors known to affect the transmission of monetary policy to firm investment. The intuition is that in an environment with agency frictions, a firm that is farther away from violating its interest coverage covenant face a lower marginal cost and borrow more to invest in riskier projects.

Research Experience and Other Employment

International Monetary Fund — 2022
Intern, Macrofinance Research Division

Research Assistant for Professor Olivier Darmouni — 2021
Columbia Business School

Research Assistant for Professor Laura Veldkamp — 2020
Columbia Business School

University of Pennsylvania - Center for Advanced Study of India — 2018-2019
Associate Director (Research) - Indian Agricultural Markets

WalmartLabs, Bengaluru — 2017-2018
Statistical Analyst

Research Intern - London School of Economics — 2017
ESRC-DFID funded project on Microfinance

Honors, Scholarships and Fellowships

Data Purchase Grant Award, PER	2023
Vickrey Award, Columbia University	2021
Harriss Award, Columbia University	2020
Dean's Fellowship, Columbia University	2019-2024
Fellowship, Indian Statistical Institute	2015-2017
Book Grant, Indian Statistical Institute	2016

Teaching Experience

Finance and the Real Economy — 2021,2023,2024

Principles of Economics — 2020,2021,2023
Wueller Teaching Award for best teaching assistant (Runner-up)

International Economics — 2022

Technical Skills

Language/Software: R, Stata, Python, Matlab, Github, LaTeX

Personal Information

Languages: English, Hindi, Gujarati
Nationality: India

Advisors

José Scheinkman (Co-Advisor) — Columbia University
js3317@columbia.edu — *Professor of Economics*

Jennifer La'O (Co-Advisor) — Columbia University
jl4196@columbia.edu — *Professor of Economics*

Matthieu Gomez — Columbia University
mg3901@columbia.edu — *Assistant Professor of Economics*