Neha Deopa

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Education

Ph.D. International Economics - The Graduate Institute of International and Development Studies
Committee: Ugo Panizza, Rahul Mukherjee & Jérémy Lucchetti
September 2015 - Expected 2021.

Advanced Courses in Economics for Doctoral Students - Study Center Gerzensee and Swiss Finance Institute
Frictions and Incomplete Markets
August 2018

M.A. International Economics - The Graduate Institute of International and Development Studies
September 2012 - September 2014

B.A. (Honours) Economics - University of Delhi
June 2009 - June 2012

Research Interests

Environmental and resource economics

Industrial Organisation

Applied stochastic processes

Working Papers

Scenes from a Monopoly: Quickest Detection of Ecological Regimes; with Daniele Rinaldo

Coronagraben. Culture and social distancing in times of COVID-19; with Piergiuseppe Fortunato
R&R at *Journal of Population Economics*

Firm Decisions under Jump-Diffusive Dynamics; with Daniele Rinaldo

Superbug Stories

Policy Publications

"World Intellectual Property Indicators" - WIPO Economics & Statistics Series (2014 & 2015) with Khan, Mosahid, K. Bergquist, R. Lamb, B. Le Feuvre, and H. Zhou.

"Hague Yearly Review" - WIPO Economics & Statistics Series (2015) with Khan, Mosahid, K. Bergquist, R. Lamb, B. Le Feuvre, and H. Zhou.

"Patent Cooperation Treaty Yearly Review " - WIPO Economics & Statistics Series (2015) with Khan, Mosahid, K. Bergquist, R. Lamb, B. Le Feuvre, and H. Zhou.

"Madrid Yearly Review" - WIPO Economics & Statistics Series (2015) with Khan, Mosahid, K. Bergquist, R. Lamb, B. Le Feuvre, and H. Zhou.

Work in Progress

The Asymmetric Economic Impact of COVID-19: Evidence from UK; with Piergiuseppe Fortunato

Religiously-Inspired Baby Boom. A Case Study of Georgia; with Kritika Saxena

Work Experience

United Nations Conference on Trade and Development, April 2019 – Present
Trade & Development Policy Consultant

The Geneva Challenge. Advancing Development Goals (IHEID), August 2015 – August 2016
Project Manager

World Intellectual Property Organization, Novemebr 2014 – July 2015
Researcher - Economics and Statistics Division

Sidley Austin, September 2013 – October 2014
Researcher - International Trade and Economic Dispute

Teaching Experience

The Graduate Institute of International and Development Studies :

International Development, Spring, 2016–2017

International Finance, Autumn, 2016–2017

International Trade, Spring, 2017–2019

Statistical Methods for Social Sciences, Autumn, 2017–2018

Macroeconomics, Autumn, 2018–19

Skills & Languages

Programming: R, STATA, Mathematica, MATLAB

GIS Software: ArcGIS, QGIS, Geoda

English, Hindi (Fluent), French (B1 and actively learning)

Conferences

2021: Royal Economic Society 2021 Annual Conference

2020: European Winter Meeting of the Econometric Society; Spanish Economic Association; Southern Economic Association; French Association of Environmental and Resource Economists; Annual conference of the Italian Economic Association; Bolivian Conference on Development Economics; Monash Business School & Warwick University - Applied Young Economist Webinar; Johannes Kepler University Linz - Brown Bag Seminar; University of Geneva & IHEID - PhD Day

References

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Rahul Mukherjee
Associate Professor of Economics
School of Economics
University of Nottingham
`rahul.mukherjee@nottingham.ac.uk`

Piergiuseppe Fortunato
Economic Affairs Officer
United Nations Conference on Trade and Development (UNCTAD)
`piergiuseppe.fortunato@unctad.org`

Paper Abstracts

Scenes from a Monopoly: Quickest Detection of Ecological Regimes[1]
with Daniele Rinaldo [Latest version]

We study the stochastic dynamics of a renewable resource harvested by a monopolist facing a downward sloping demand curve. We introduce a framework where harvesting affects the resource's potential to regenerate, resulting in sequential endogenous regime shifts. In a multi-regime setting, the firm faces uncertainty in both the environmental fluctuations and the timing of the shift, and has to find the profit-maximizing extraction policy while simultaneously detecting in the quickest time possible the change in regime. Quickest detection methods allow our model to encapsulate the idea of environmental surveillance of ecological dynamics. Our key finding is that post-detection of a negative regime shift, at higher stock levels, the firm pursues an aggressive extraction due to an elastic market demand allowing the monopolist to charge higher markups. Pre-detection, we find that intensification of extraction is possible as a consequence of a sense of urgency caused by the possibility of collapse due to the regime shift. For lower stocks, a precautionary behaviour can result due to increasing resource rent. We study the probability of resource extinction and show the emergence of catastrophe risk which can be both reversible and irreversible based on the extinction's expected hitting time.

Coronagraben. **Culture and social distancing in times of COVID-19**
Piergiuseppe Fortunato

Social distancing measures have been introduced in many countries in response to the COVID-19 pandemic. The rate of compliance to these measures has varied substantially. We study how cultural differences can explain this variance using data on mobility in Swiss cantons between January and May 2020. We find that mobility declined after the outbreak but significantly less in the German-speaking region. Contrary to the evidence in the literature, we find that within the Swiss context, higher generalized trust in others is strongly associated with lower reductions in individual mobility. Additionally support for a limited role of the state in matters of welfare is also found to be negatively associated with mobility reduction. We attribute our results to a combination of these cultural traits having altered the trade-off between the chance of contracting the virus and the costs associated with significant alterations of daily activities.

Superbug Stories
[Latest Version]

Antimicrobial resistance (AMR) is one of the biggest global public health threats today. Although misuse of antibiotics is an important driver, AMR is a complex problem that is interlinked with the wider environment, especially with agriculture. In this paper, within the context of England, I show that intensive

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[1]An earlier version of this paper has been circulated under the title "Scenes from a Monopoly: Renewable Resources and Quickest Detection of Regime Shifts".

livestock farming plays a significant role in driving antimicrobial resistance in humans. I then show that poverty is a crucial factor influencing this relation, with higher poverty magnifying the effect intensive farming has on resistance. Lastly, I document agricultural pollution and contamination via ready-to-eat meals as potential mechanisms underlying the transmission from intensive farms to humans.

Firm Decisions under Jump-Diffusive Dynamics
with Daniele Rinaldo [Latest Version]

We present a model of firm investment under uncertainty and partial irreversibility in which uncertainty is represented by a jump diffusion. This allows to represent both the continuous Gaussian volatility and the discontinuous uncertainty related to information arrival, sudden changes and large shocks. The model shows how both sources of uncertainty negatively impact the optimal investment and disinvestment policies, and how the presence of large negative jumps can drastically affect the firm's ability to recover. Our results show that the standard Gaussian framework consistently underestimates the negative effect of uncertainty on firm investment decisions. We test these predictions on a panel of UK firms: we first structurally estimate the uncertainty parameters using multinomial maximum likelihood and differential evolution techniques and subsequently study their impact on firm investment rates, validating our model predictions.

Last updated: March 1, 2021