

# Neha Deopa

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## Education

### **Ph.D. International Economics - The Graduate Institute of International and Development Studies**

Committee: *Ugo Panizza* (Supervisor) & *Rahul Mukherjee*

September 2015 - Expected 2021.

### **Advanced Courses in Economics for Doctoral Students - Study Center Gerzensee and Swiss Finance Institute**

Frictions and Incomplete Markets taught by *Prof. Yuliy Sannikov*

August 2018

### **M.A. International Economics - The Graduate Institute of International and Development Studies**

Supervisor: *Prof. Ugo Panizza*

September 2012 - September 2014

### **B.A. (Honours) Economics - University of Delhi**

June 2009 - June 2012

## Research Interests

Environmental and resource economics

Firm behaviour: theory and empirical analysis

Applied stochastic processes

## Work Experience

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

World Intellectual Property Organization, November 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 (A2 and actively learning)

## Conferences (scheduled \* )

**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

**2019:** IHEID Brown Bag Lunch; IHEID Development Therapy

## References

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## Research

### *Job Market Paper*

#### **Scenes from a Monopoly: Quickest Detection of Ecological Regimes<sup>1</sup>**

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 sequentially affects the resource's potential to regenerate, resulting in an endogenous ecological regime shift. In a multi-period setting, the firm's objective is to find the profit-maximizing harvesting policy while simultaneously detecting in the quickest time possible the change in regime. Encapsulating the idea of environmental surveillance, the use of quickest detection method allows us to easily translate our framework to real-time detection. Solving analytically, we show that a negative regime shift induces an aggressive extraction behaviour due to a combination of faster detection, a sense of urgency, and higher markups. Precautionary behaviour can result due to increasing resource rent. We study the probability of extinction and show the emergence of catastrophe risk which can be both reversible and irreversible.

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

## *Other Papers*

### **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.

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

Piergiuseppe Fortunato - *Covid Economics: Vetted and Real-Time Papers, Issue 39*

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: The Economic Burden of Antimicrobial Resistance**

This paper explores the question of whether the rising demand for processed convenience foods, captured through increasing consumption of ready meals, is positively correlated with the rising rates of antimicrobial resistance (AMR) in humans. I begin by positing a relationship between demand for processed poultry and pork products and intensive livestock farming, in which an increasing demand is met by increasing intensification. Subsequently I investigate whether these increasing number of intensive pig and poultry farms have a positive correlation with the AMR rates in humans. I utilize a simple model within a von Thunen framework to examine the intensification of livestock production and its effects on land use and show how environmental externalities of these intensification can amplify pathways of exposure to AMR for humans. I estimate this relation by utilizing spatial maps of livestock intensification and combining them with UK county level data on AMR in humans and other socio-demographic factors from the UK household longitudinal study.

## *Policy Publications*

World Intellectual Property Indicators - 2014 and 2015

Hague Yearly Review - 2015

Patent Cooperation Treaty Yearly Review - 2015

Madrid Yearly Review - 2015