Office Contact Information

Aix-Marseille School of Economics

5-9 Boulevard Maurice Bourdet

13001 Marseille, France

Placement officers:

Timothée Demont timothee.demont@univ-amu.fr

Romain Ferrali romain.ferrali@univ-amu.fr

References

Ugo Panizza

Professor of Economics

The Graduate Institute (IHEID)

ugo.panizza@graduateinstitute.ch

Lore Vandewalle

Associate Professor of Economics The Graduate Institute (IHEID)

lore.vandewalle@graduateinstitute.ch

Jérémy Laurent-Lucchetti

Associate Professor of Economics

University of Geneva

jeremy.lucchetti@unige.ch

Nicolas Berman

Professor of Economics

Aix-Marseille School of Economics

nicolas.berman@univ-amu.fr

Current Position

Aix-Marseille School Of Economics

Postdoctoral researcher Funded by the *Swiss National Science Foundation* October 2021 -

Education

The Graduate Institute of International and Development Studies (IHEID)

Ph.D. International Economics, *summa cum laude* September 2015 - March 2021

M.A. International Economics September 2012 - September 2014

University of Delhi

B.A.(Honours) Economics June 2009 - June 2012

Research Interests

Primary: Environmental economics, Political economy

Secondary: Culture & Religion, Resource economics, Applied stochastic processes

Publications

Language and the cultural markers of COVID-19, with Piergiuseppe Fortunato, *Social Science & Medicine*, 301 (2022)

Coronagraben in Switzerland: culture and social distancing in times of COVID-19, with Piergiuseppe Fortunato, *Journal of Population Economics*, 34 (2021)

Job Market Paper

Sacred Ecology: The Environmental Impact of African Traditional Religions

Do religions codify ecological principles? This paper explores empirically and theoretically the role religious beliefs play in shaping environmental interactions. I study African Traditional Religions (ATR) which place forests within a sacred sphere. Relying on the unique case of Benin where adherence is freely reported, I use an instrumental variable strategy by exploiting the variation in proximity to the Benin-Nigerian border. I find that one standard deviation increase in ATR adherence has a 0.4 standard deviation positive impact on the five-year average annual change in forest cover. Ruling out social capital and fear as viable mechanisms, I find evidence of the presence of a set of attitudes within adherents that reflect environmental stewardship and sustainability. Utilizing these results, I build a novel non-market interactions model of agents with heterogeneous religious adherence and its effect on the spatial density of the forest cover. The model shows how the potential scarcity of natural resources can characterize both individual and population extraction decisions, and the distribution of religious beliefs amongst the population can be a key driver of forest conservation. The model also characterizes the impact of peer effects and risk aversion vis-à-vis religious adherence on individual forest consumption policies.

Working Papers

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

We study the stochastic dynamics of a renewable resource extracted by a monopolist whose actions affect the resource's ability to regenerate, resulting in sequential regime shifts. The firm faces further uncertainty in the timing of these shifts. We encapsulate in our model environmental surveillance of ecological dynamics where the firm searches for the profit-maximizing extraction policy while simultaneously detecting in the quickest time possible the change in regime. We provide the conditions that determine whether an adverse regime shift can lead to either an aggressive or a precautionary extraction policy, depending on the interaction between market demand, resource scarcity and time horizon. We show how implementing the detection procedure is Pareto optimal. We apply our framework to the case of the Cantareira water reservoir in São Paulo, Brazil, and study the events that led to its depletion and the consequent water supply crisis.

Religiously-Inspired Baby Boom. A Case Study of Georgia

with Kritika Saxena, Lyman Stone and Seung-hun Chung

We study the persuasive impacts of religious authority figures on fertility decisions. We do so in the context of Georgia where in December 2007, in a move to boost the declining fertility rates, the Georgian Orthodox Church's Patriarch began to personally baptise third or higher parity child. Using synthetic control method and interrupted time series analysis we find suggestive evidence of higher fertility rates post 2008. Encouraged by macro evidence, using micro-data we exploit exogenous variation in birth timing and the religion and ethnicity of the mother to measure short and long run causal impact of religious persuasion. We find that the announcement significantly increased the probability of giving birth by 2 percentage points. Using quantile and counterfactual density estimation we find that this increase was not driven by higher parity fertility but by first and second births. We also find evidence of a decrease in the probability of having an abortion.

Firm Decisions under Jump-Diffusive Dynamics

with Daniele Rinaldo

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.

Work Experience

United Nations Conference on Trade and Development, 2019 - 2022 Trade & Development Policy Consultant

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

Teaching Experience

Macroeconomics, Autumn, 2018 - 19
International Trade, Spring, 2017 - 2019
Statistical Methods for Social Sciences, Autumn, 2017 - 2018
International Development, Spring, 2016 - 2017

Skills & Languages

Programming: R, Stata, Mathematica

GIS Software: ArcGIS, QGIS, Geoda

English, Hindi, French (B1 and actively learning)

Conferences (scheduled †)

2022: EBES Conference[†], EAERE-ETH European Winter School[†], Development Economics, Applied Microeconomics and Econometrics Research Cluster (IHEID) [†], French-Japanese Webinar in Economics[†]

2021: Royal Economic Society (RES); European Association of Environmental and Resource Economists (EAERE); European Association for Research in Industrial Economics (EARIE); Association of Southern-European Economic Theorists (ASSET)

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

Last updated: September 18, 2022