ZEINA HASNA

Faculty of Economics, University of Cambridge, CB3 9DD
Email: zh274@cam.ac.uk Citizenship: Lebanese

EDUCATION

PhD in Economics, University of Cambridge 2017 - Expected May 2022

Primary Fields: Macroeconomics, Climate Change

Thesis: Essays on the Macroeconomic Effects of Climate Change

References:

Prof. Tiago Cavalcanti University of Cambridge tvdvc2@cam.ac.uk +44 1223 335 262	Prof. Giancarlo Corsetti University of Cambridge gc422@cam.ac.uk +44 1223 335 235
Prof. Chryssi Giannitsarou University of Cambridge cg349@cam.ac.uk +44 1223 762 976	Dr. Kamiar Mohaddes University of Cambridge km418@cam.ac.uk +44 1223 366 933

M.Phil. in Economic Research, University of Cambridge 2014 - 2015

Thesis: How Does Oil Affect the Gross Domestic Product Composition?

B.Sc. in Applied Mathematics, American University of Beirut - *Distinction* 2013 - 2014

B.A. in Economics, American University of Beirut - *Distinction* 2010 - 2013

JOB MARKET PAPER

The Grass Is Actually Greener on the Other Side: Evidence on Green Multipliers from the United States

Abstract: In this paper, I estimate the local multiplier of spending in green energy in the United States. I construct a novel state-level dataset, and isolate the exogenous variation in green energy spending by exploiting the institutional characteristics of the green budget allocation by the Department of Energy (DoE). I find that a $1 increase in green investment increases state-level output by $1.1 contemporaneously, and up to $4.2 within two years of implementation. These estimates are large in comparison to the findings of the literature on public infrastructure multiplier, or the multiplier of non-green investments by DoE. I also find large multipliers at a disaggregated level: green energy spending has significant effects on sectoral output, employment, and investment. I then contrast green and non-green multipliers quantitatively by specifying an open economy New Keynesian model with public capital, where each US state is an open economy within a fiscal and monetary union. I calibrate the public capital to green and non-green energy using a transaction-level dataset on awards by the Department of Energy. Model-based counterfactual experiments suggest that 86% of the difference between the green and non-green multipliers is explained by the initial stock of public capital in each energy type. As green public capital is further away from the steady-state, the marginal productivity of investment is higher in the short-run, leading to higher multipliers relative to investment in non-green public capital.

WORKING PAPERS

Climate Change Mitigation Policies: Aggregate and Distributional Effects, with Tiago Cavalcanti and Cezar Santos - *Cambridge Working Papers in Economics 2122, R&R Economic Journal*

The Unequal Effects of Covid-19 on Economists' Research Productivity, with Noriko Amano-Patino, Elisa Faraglia and Chryssi Giannitsarou- *CWPE2038*

WORK IN PROGRESS

Macroeconomic Consequences of Climate Volatility and Weather Shocks: Evidence from India, with Henry Hatton and Kamiar Mohaddes

Abstract: This paper investigates the long-run macroeconomic consequences of climate volatility and weather shocks in India at the state and state-sector levels. We collect temperature and precipitation data from a 0.5-degree by 0.5-degree grid and utilize economic data spanning 18 states and 11 sectors over the years 1970 to 2017. Contrary to previous economic literature that typically looks at the level of temperature and precipitation, we implement state-of-the-art econometric techniques to explore the output effects of positive and negative deviations from their historical norm. We find that a persistent 0.01°C annual decrease in temperature below its historical norm within India reduces real output per capita growth by 0.13 percentage points per year. Similarly, a persistent 1 meter decrease in precipitation below its historical norm reduces real output per capita growth by 0.12 percentage points per year. We also find that these effects are heterogeneous across sectors.

Climate-led Structural Change: Evidence from Brazil, with Diogo Baptista, Tiago Cavalcanti, Daniel da Mata and Kamiar Mohaddes

Abstract: In this paper, we investigate the short- and long-run macroeconomic consequences of climate change uncertainty and volatility of weather events in Brazil. We collect annual temperature data from a 0.5-degree by 0.5-degree grid as well as economic data at the municipality- and state-levels in Brazil. Preliminary findings show that climate volatility, both in terms of positive and negative deviations from its historical norm, has negative effects on output in Brazil. A persistent 0.01°C annual increase (decrease) in temperature above (below) its historical norm significantly decreases yearly real output per capita growth in Brazil by 0.01 (0.05) percentage points. The empirical estimates will feed into a spatial model with climate damages, calibrated for the Brazilian economy, to estimate the effect of climate policy inaction on Brazil's structural transformation path until 2100, under different representative concentration pathway scenarios.

ARTICLES AND REPORTS

Hasna, Z., Hatton, H., & Mohaddes, K. (2021) "**Greenovate for a Better Environment and Economy**"

Hasna, Z. (2017) "**Shielding Lebanon's Industrial Sector from the Resource Curse**", *LCPS Policy Article*

BOOK CHAPTERS

Amano-Patino, N., Faraglia, E., Giannitsarou, C., & Hasna, Z. (2020) "**Who is doing new research in the time of COVID-19? Not the female economists**" in Publishing and Measuring Success in Economics, CEPR.

Hasna, Z. (2019) "**How Will Oil Affect Lebanon's Export Opportunities?**", in Atallah, S. & Fattouh, B. (ed.) *Future of Petroleum in Lebanon: Energy, Politics and Economic Growth.* I.B. Tauris Co Ltd

TEACHING EXPERIENCE

Teaching Fellow, University of Cambridge

- Undergraduate Macroeconomics (Real Business Cycles) 2018 - 2020
- Undergraduate Macroeconomics (Monetary Policy, Fiscal Policy) 2019 - 2020
- Econometrics Software Classes (Undergraduate and Graduate) 2018 - 2020

ECONOMICS AND POLICY WORK EXPERIENCE

PhD Intern, International Monetary Fund, Research Department 2020

Economic Analyst, World Bank, Macroeconomics, Trade and Investment Global Practice 2016 - 2019

Economic Researcher, **Lebanese Center for Policy Studies (LCPS)**, Lebanon 2015 - 2016

SELECTED HONORS AND AWARDS

Faculty of Economics, Teaching Fellow Award	2020
Outstanding Student Contribution to Inclusive Practice, University of Cambridge	2019
Cambridge INET Award, University of Cambridge	2019 - 2021
Cambridge Trust Award, University of Cambridge	2017 - 2020
Cambridge Trust, British Lebanese Association & Said Foundation Award	2014 - 2015

PRESENTATIONS & WORKSHOPS

Presentations	**2021**	Society for Economic Dynamics, North American Summer Meeting Econometrics Society, International Monetary Fund - Research Department, Cambridge Energy Policy Research Group
	2020	Lisboa Macro-Group Workshop
	2019	Uppsala PhD Forum, American University of Beirut, Envecon Applied Environmental Economics Conference, Cambridge Energy Policy Research Group
Workshops	**2019**	CEMFI Course on Macroeconomics & Climate Change IZA Workshop on Environment & Labor Markets
	2018	Paris School of Economics Course on Climate Change Economics

SERVICE

Refereeing	Journal of Development Economics, European Economic Review, B.E. Journal of Macroeconomics, Middle East Development Journal	
Faculty of Economics	Cohost of the mini-conference on the macroeconomics of climate change	2021
	Cofounder of the the climate change reading group	2019 - 2020
	PhD representative	2019 - 2020
	Member of the Equality and Diversity Committee	2017 - 2021
	Coauthor of the Athena Swan report - Bronze medal	2017 - 2018

OTHER SKILLS

Software	Stata • MATLAB • ArcGIS (basic) • LaTeX
Languages	Arabic *(native)* • English *(near-native fluency)* • French *(beginner)*