

JAMES E. SAYRE

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Doctoral Studies University of California, Berkeley
Ph.D., Agricultural and Resource Economics, Expected completion May 2023
DISSERTATION: “Essays in International Trade and Agricultural Economics”

PRIMARY FIELDS: International Trade, Agricultural Economics
SECONDARY FIELDS: Development, Environment

Professor Thibault Fally
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Department of Agricultural
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Professor Marco Gonzalez-Navarro
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Professor Matilde Bombardini
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Professor Andrés Rodríguez-Clare
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Department of Economics

Prior Education **University of Minnesota** B.Sc. Economics and Mathematics, *summa cum laude* 2016
Harvard College Visiting Undergraduate Student 2013-2014

Teaching **UC Berkeley** Economics C181, *International Trade*, Andres Rodriguez-Clare Sp. 2020 & 2021
UC Berkeley Economics C181, *International Trade*, Thibault Fally F. 2018 & 2020, Sp. 2018
UC Berkeley Public Policy 275, *Spatial Data and Analysis*, Solomon Hsiang F. 2019

Languages English (native), Spanish (advanced)

Grants, Fellowships, and Awards 2022 The Weiss Fund for Research in Development Economics (\$14,700, with A. Cisse & T. Fally)
2021 John L. Simpson Graduate Student Research Fellowship in International Area Studies (\$7,500)
2021, 2017 Giannini Foundation of Agricultural Economics Grant (\$24,675 & \$19,712, with T. Fally)
2021 Outstanding Graduate Student Instructor Award
2021 ARE Summer Research Grant (\$3,000)
2020 Sponsored Projects for Undergraduate Research Grant (\$1,500, with Y. Moon)
2020 Berkeley Economists for Equity Small Research Grant (\$1,000)
2019 JPMCC International Commodities Symposium Best Paper Award (\$2,000)
2019 The Sacheti Family Fellowship (\$1,500)
2019 J-PAL Crime and Violence Initiative Exploratory Grant (\$9,800)
2019 ARE Travel Grant (\$1,000) and Graduate Division Travel Grant (\$1,500)
2017 Data Science for the 21st Century NSF Fellowship & Traineeship (\$50,000)
Earlier Charles and Myrtle Stroud Scholarship, National Scholarship for University of Minnesota Students, University of Minnesota Honors Program and College of Liberal Arts Dean’s List

Research Papers

“Farm to Firm: Clustering and Returns to Scale in Agricultural Value Chains”

In many countries, agricultural production is unequally distributed across space, often times located in one or two productive clusters within a country. I argue that this relationship is driven by crop-specific farm-to-firm linkages, which generate regions of high specialization in exporting and specific crop cultivation, but leave many regions without these linkages unable to specialize. Empirically, I show causal evidence that farms located closer to exporters of a given crop are more likely to cultivate it. Using farm and firm microdata from Mexico, I estimate the fixed costs of entry for firms in the agricultural value chain as well as input costs of production at the farm level, both of which are partially driven by the costs of compliance with phytosanitary barriers. I then develop a model which incorporates both farms and firms in the agricultural value chain, and can explain the concentration of agricultural production across space. Finally, using model based counterfactual analysis, I examine which policies can best facilitate the goal of high value agricultural export promotion as well as the ability of agricultural value chains to shift under climate change.

“Commodity Trade Matters” with Thibault Fally

Reject and Resubmit, American Economic Journal: Macroeconomics, 2019. [NBER Working Paper #24965](#).

Primary commodities are used as inputs into all production processes, yet they account for approximately 16 percent of world trade. Despite their share in trade, we show that the aggregate gains from trade are largely understated if we ignore key features of commodities: low price elasticities of demand (difficulty in finding substitutes), low price elasticities of supply, and high dispersion of natural resources across countries. We develop a general-equilibrium model of consumption, production, and input-output linkages that explicitly accounts for these features. Our simulations confirm that the gains from trade are significantly larger, especially when considering large trade cost changes.

Research in Progress

“The Promise of Crop Substitution Programs”

Crop substitution programs have begun to attract the attention of policymakers eager to stem the production of illegal drugs while supporting the poor rural farmers who cultivate them. However, drug policy researchers argue that such programs are unlikely to succeed due to “balloon effects”, the general equilibrium effects of a reduction in supply increasing production elsewhere. I study the context of Mexico, where the production of illegal drugs is roughly estimated to employ up to 450,000 people. I undertake a remote sensing effort to detect opium poppy in major production zones, and coupled with panel data on the production of other agricultural crops, I estimate elasticities of substitution between illicit and licit crops. I then develop a model to understand the subsidies necessary to give rise to a substantial reduction of illegal drug production, as well as compare the welfare impacts of a price subsidy program to the effects of eradication campaigns.

“The Long Run Impact of Colonization on Crop Choice” with Abdoulaye Cisse and Thibault Fally

We examine the high degree of path dependence in crop specialization and in crop-specific export patterns in West Africa. We argue that such cultivation decisions can be partially attributed to crops these regions were historically forced to grow under European colonization. Using variation in demand for crops coming from colonists’ home countries of origin as well as historical maps of where crops were grown, we demonstrate that: (i) countries’ production patterns were driven by local demand in European markets, and (ii) countries that historically exported certain crops to Europe are subsequently more likely to cultivate as well as export those crops today and that this finding is not purely driven by agro-ecological conditions or trade costs.

Prior Employment

UC Berkeley, Graduate Student Researcher (Profs. T. Fally, M. Gonzalez-Navarro, & E. Ligon) 2016 - 2022
University of Minnesota, Research Assistant (Professor Paul Glewwe) 2014 - 2015
Harvard University, Research Assistant (Professor Melissa Dell) 2013 - 2014

External Talks

2022 AAEA Meetings (Anaheim), DevPEC (Stanford), ITFA Conference (Online), PacDev (Online), UEA Summer School (U de Barcelona)
2021 AAEA Meetings (Online), Agricultural Policy Conference (Online), OSWEET (Online)
2020 WEAI Graduate Student Workshop (Online)
2019 JP Morgan Commodities Center International Commodities Symposium (CU Denver)
2018 Rocky Mountain Empirical Trade Conference (U of Ottawa), Society for Economic Dynamics Annual Meeting (ITAM), Tinbergen Institute Conference on International Trade (Amsterdam)

Activities

2020 - 2022 Member of the ARE Diversity, Equity, and Inclusion Research and Pedagogy Subcommittee
2020 - 2022 Mentor for the Berkeley Underrepresented Minorities in Economics and BEEPS groups
2020 - 2022 Honors thesis advisor, Environmental Economics and Policy and Public Health Departments