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| CONTACT INFORMATION | CEMFI Casado del Alisal 5 28014 Madrid, Spain | Placement Directors: Prof. Nezih Guner Prof. Dante Amengual | Mobile: +34 6 43 90 15 12 sophie.nottmeyer@cemfi.edu.es www.sophienottmeyer.github.io |
| RESEARCH INTERESTS | Development Economics, Spatial Economics, Applied Microeconomics | | |
| EDUCATION | CEMFI Ph.D. in Economics Dissertation: <i>"Essays on Economic Development and Productivity Across Space"</i> Visiting Ph.D. Student, Yale University, hosted by Prof. Mushfiq Mobarak | 2025 | 2023 |
| | Sciences Po, Paris 1 Panthéon-Sorbonne & Universitat Autònoma de Barcelona Master in Economics and Quantitative Economics (<i>double degree</i>) | 2018 | |
| | University of Tübingen B.Sc. in International Economics and European Studies Visiting Student, University of Guadalajara (Mexico) | 2015 | 2014 |
| REFERENCES | Prof. Diego Puga CEMFI diego.puga@cemfi.es | Prof. Paula Bustos Universitat Pompeu Fabra paula.bustos@upf.edu | Prof. Monica Martinez-Bravo CEMFI (<i>on leave</i>) monica.martinezbravo@gmail.com |
| RESEARCH | Job Market Paper “Trac(k)tors of Change: Monitoring, Tractor Mobility and Agricultural Mechanization in Kenya” <i>Abstract:</i> Private rental markets can help small-scale producers in developing countries overcome capital indivisibilities and adopt productive technologies, yet they remain limited in scope. This paper studies the role of monitoring problems on the supply side of tractor rental markets in Kenya, where moral hazard between tractor owners and operators discourages owners from sending tractors to remote areas, limiting the efficient spatial allocation of scarce capital and, thus, access to mechanization. To study this mechanism, I evaluate the impact of a new GPS tracking app that allows owners to monitor their operators remotely, combining unique tractor GPS data from around 1,200 tractors and 900,000 georeferenced fields, satellite data and an original farmer survey with a quantitative spatial model. After adoption, monitored tractors gradually expand their range of operations and reallocate toward areas where potential returns to mechanization are higher, consistent with a reduction in the monitoring cost and a more efficient spatial allocation. Further, fields visited by monitored tractors experience larger increases in remotely-sensed vegetation growth than similar nearby fields, suggesting productivity gains at destination. Finally, I develop and estimate a quantitative spatial model of tractor location choice that incorporates monitoring cost to quantify the aggregate gains from the technology. The results indicate that digital monitoring raises output by 2%, reducing spatial misallocation by 15%, and is more cost-effective than an equivalent subsidy. | | |
| | Work In Progress “Informality and the City Size Wage Premium: Evidence from Brazil” “Milky Way: Market Structure and Behavior of Informal Milk Traders” (with Guanghong Xu and Martin Nandelenga) “Ethnic Diversity and Technology Choice in Manufacturing” | | |

Other Publications

“Advancing Corn Yield Mapping in Kenya Through Transfer Learning”
(with Ahaan Bohra, Chenchen Ren, Shuo Chen and Yuchi Ma)
Remote Sensing, 17(10), 1717.

Experience

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| Research Assistant to Prof. Monica Martinez-Bravo, CEMFI | 2022-2023 |
| Research Assistant to Prof. Paula Bustos, CEMFI | 2020-2021 |
| Pre-doc Research Assistant to Prof. Francis Kramarz, CREST | 2018-2019 |
| Research Assistant, Institute for Applied Economic Research (IAW) Tübingen | 2014-2015 |

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| FELLOWSHIPS, AWARDS & GRANTS | The Weiss Fund PhD Research Grant (PI, \$17,500) | 2023 |
| | STEG Small Research Grant (PI, ~\$34,000) | |
| | María de Maeztu PhD Exploration Grant, CEMFI (PI, ~\$1,800) | |
| | PEDL Exploratory Research Grant (Co-PI, ~\$8,800) | 2022 |
| | STEG PhD Research Grant (PI, ~\$4,700) | |
| | PhD Fellowship (FPI), Spanish State Research Agency (AEI) | 2021 |
| | María de Maeztu PhD Track Excellence Scholarship, CEMFI | 2019 |

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| TEACHING | Graduate | |
| | <i>Quantitative Spatial Models</i> , CEMFI Summer School | 2024 |
| | Teaching Assistant to Prof. Nick Tsivanidis (UC Berkeley) | |
| | <i>Development Economics</i> , CEMFI | 2024, 2023 |
| | Teaching Assistant to Prof. Monica Martinez-Bravo | |
| | <i>Urban Economics</i> , CEMFI | 2022 |
| | Teaching Assistant to Prof. Diego Puga | |

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| PRESENTATIONS | Undergraduate | |
| | <i>Big Data: Applications to Spatial Data</i> , CEMFI Summer Internship Program | 2022 |
| | Instructor | |
| | <i>Mathematics for Economists</i> , University of Tübingen | 2012 |
| | Teaching Assistant to Prof. Thomas Dimpfl | |
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| SERVICE | CEPR Paris Symposium PhD Poster Sessions (<i>scheduled</i>) | 2025 |
| | NEUDC (Tufts University) (<i>scheduled</i>) | |
| | Firms, Labor Markets, and Development Workshop (University of Bari) | |
| | Universitat Pompeu Fabra (Internal Applied Lunch Seminar) | |
| | Universitat Pompeu Fabra (CREI International Lunch Workshop) | 2024 |
| | Yale University (Development Lunch), | 2023 |
| | CAGE Summer School (University of Warwick) | |
| | PEDL Young Scholars Matchmaking Workshop (NYU Abu Dhabi) | 2022 |

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| OTHER PROFESSIONAL EXPERIENCE | Co-Organizer, Applied Micro PhD Workshop, CEMFI | 2022-2023 |
| | Mentor, Graduate Applications International Network (GAIN) | |
| | Mentor, Women in Economics (WiE) Initiative | 2021 |

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| ADDITIONAL INFORMATION | Evaluation Unit Intern, Development Co-operation Directorate, <i>OECD</i> , Paris | 2017 |
| | M&E Junior Consultant, <i>German Technical Cooperation Agency (GIZ)</i> , Rwanda | 2016 |
| | Intern, Promotion of the Economy and Employment, <i>GIZ</i> , Rwanda | |
| | Economic Division Associate, <i>Permanent Mission of Germany to the UN</i> , Geneva | 2015 |

Programming: Stata, Python, QGIS, Matlab, R
Languages: German (native), English (fluent), Spanish (fluent), French (advanced)