

Science and Technology Group Annual Report FY2024

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Science and Technology Associate

1 Introduction

I am a labor economist. In my research I use empirical and modeling methods to study different questions related to inequality, social mobility, labor markets, health, and fertility. In particular, I am interested in policy implication and policy evaluations.

2 Activities and Findings

During FY2024, I mostly worked on two following projects, related to my KAKENHI grants:

1. Health and Intergenerational Mobility

Health is an important dimension of human capital, it affects the way children can use and develop their cognitive and non-cognitive abilities. While the role of education and education policies received a lot of attention in the literature on intergenerational mobility, almost nothing is known on how medical policies affect intergenerational mobility and inequality. In this project, I develop and estimate a human-capital based overlapping generations model of household decisions that take into account multidimensionality and dynamic nature of human capital investments. I distinguish three forms of human capital: health capital and human capital (cognitive and non-cognitive abilities), and model explicitly government policies in education and health, as well as parental decisions regarding their monetary and time investments into cognitive and non-cognitive abilities, as well as health (curative and preventive spending). *This work is heavily based on my previous unpublished work during PhD. The project is at the stage of estimating the model now.*

2. Fertility and Family-Friendly Policies

Family-friendly policies are meant to help women balance work and family life and to encourage them to enter and stay in the labor market. Implicitly or explicitly, such policies also encourage fertility since having a child makes the balancing act much harder for working women. How effective are such policies in increasing fertility? We answer this question using a search model where firms make hiring, promotion, and firing decisions. In the model, all jobs start as temporary with a low firing cost, and if a promotion takes place, they become permanent with a higher firing cost. Women decide whether or not to participate in the labor market and, if they do, whether or not to accept offers from firms, accumulating human capital as they work. They also decide how many children to have and when to have them. Hiring a woman is costly for a firm, both directly, in production, and indirectly, through high turnover. The analysis focuses on Spain, a country with very low fertility and a highly-regulated labor market. We use administrative data from the Spanish Social Security records to discipline the model and to evaluate the effects of the Family Reconciliation Act of 1999, which allowed workers with children younger than 6 years old to work part-time and be protected against dismissals or layoffs. Finally, we use the model to study a battery of policies that make firing and promotion harder or easier for women. We show that firms' reactions to family-friendly policies generate a trade-off: policies that increase fertility result in lower average earnings, and larger gender wage gap. *This work is at the stage of writing a paper and submitting it.*

3 Current Collaborations

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1. Family-Friendly Policies and Fertility: What Firms Have to Do With It?
Collaborators: Olympia Bover (CEMFI), Nezih Guner (Director and Professor of Economics at CEMFI), Alessandro Ruggieri (Assistant Professor, CUNEF), Carlos Sanz (Research Economist, Bank of Spain)
2. Life is about timing: Age at cardiovascular health shocks and its role for survival and socioeconomic inequalities across the life cycle.
Collaborators: Michael Kuhn (Director of Economic Frontiers Program, IIASA), Sonja Spitzer (PostDoc, University of Vienna), Jana Ströbinger (University of Vienna), Vanessa di Lego (Assistant Professor, Universidade Federal de Minas Gerais (Brazil)).

4 Publications and other output

Author list, *Title*, Journal or other reference, volume information (year)

Publications:

- Simon A Rella, **Yuliya A Kulikova**, Aygul R Minnegalieva, Fyodor A Kondrashov, Complex vaccination strategies prevent the emergence of vaccine resistance, *Evolution*, Volume 78, Issue 10, 1 October 2024, Pages 1722–1738, <https://doi.org/10.1093/evolut/qpae106>
- Nezih Guner, **Yuliya A. Kulikova**, Arnau Valladares-Esteban, Does the added worker effect matter?, *Review of Economic Dynamics*, Volume 56, 2025, 101271, <https://doi.org/10.1016/j.red.2025.101271>

External Presentations:

- University of Osaka (Japan)
- “Reducing Inequality Within and Across Generations” Workshop (Vienna, Austria)
- University of Girona (Spain)

External Funding:

- KAKENHI Start-Up Grant, FY2022-2024 – 2,860,000 yen
- KAKENHI Early Career Scientist, FY2023-2025 – 4,680,000 yen
- COI-NEXT “Healthy Mind, Healthy Body, Healthy Environment” FY2024-2026 – 10 mln yen for FY2024, 8 mln yen for FY2025, subsequent funding is determined upon evaluation

Other:

Representative of Japan and OIST in Global Task Force “[Health and Ageing](#)” [MIRAI 3.0](#)