

University of Minnesota - Twin Cities

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**Curriculum Vitae
Fall 2023****Martín García-Vázquez****Personal Data***Address*

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Contact Information

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Citizenship: Spain (J-1 Visa, not subject to two-year requirement)

Major Fields of Concentration

Labor, Public, Macroeconomics, Econometrics

Education

<i>Degree</i>	<i>Field</i>	<i>Institution</i>	<i>Year</i>
PhD	Economics	University of Minnesota (expected)	2024
MA	Economics and Finance	CEMFI (Madrid)	2018
BA	Economics	Universidad Carlos III (Madrid)	2016

Dissertation

Title: “Essays on Human Capital and Health Economics”

Dissertation Advisor(s): Professor Mariacristina De Nardi and Professor Jeremy Lise

Expected Completion: Summer 2024

References

Professor Mariacristina De Nardi	(612) 624-1978 denar001@umn.edu	Department of Economics University of Minnesota 4-101 Hanson Hall 1925 Fourth Street South Minneapolis, Minnesota 55455
Professor Jeremy Lise	(612) 625-0941 jlise@umn.edu	
Professor Joseph Mullins	(612) 625-7858 mullinsj@umn.edu	
Dr. Alessandra Fogli	(612) 204-5485 afogli00@gmail.com	Research Department Federal Reserve Bank of Minneapolis 90 Hennepin Avenue Minneapolis, Minnesota 55401

Honors and Awards

- 2022-2023 *Ramón Areces Graduate Fellowship*, Fundación Ramón Areces, Madrid, Spain
2021 *First and second place in the Third-Year paper competition*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. First double winner in department history.
- 2020-2022 *La Caixa Postgraduate Fellowship*, Fundacion La Caixa, Barcelona, Spain
Summer 2020 *UMN Department of Economics pre-dissertation Fellowship*, Department of Economics, University of Minnesota, Minneapolis, Minnesota
- 2016-2018 *Bank of Spain Postgraduate Fellowship*, Bank of Spain, Madrid, Spain
2016 *Premio de Excelencia*, Universidad Carlos III de Madrid, Getafe, Spain. Awarded to top undergraduate students.
- 2016 *Premio Extraordinario de Grado*, Universidad Carlos III de Madrid, Getafe, Spain. Awarded for having the highest GPA in the Economics Bsc program.
- 2015-2016 *Beca de Excelencia*, Comunidad de Madrid, Madrid, Spain. Scholarship awarded for outstanding academic performance.

Teaching Experience

- Summer 2020 *Teaching Assistant*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. Led recitations for the Math Camp for incoming Economics PhD students.
- Spring 2020 *Teaching Assistant*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. Led recitations for undergraduate *Principles of Macroeconomics*.
- Fall 2019 *Teaching Assistant*, Department of Economics, University of Minnesota, Minneapolis, Minnesota. Led recitations for undergraduate *Principles of Macroeconomics*.

Research Experience

- 2022-Present *Research Assistant*, Federal Reserve Bank of Minneapolis, Minneapolis, Minnesota. Research assistant for Fabrizio Perri.
- 2017 *Research Assistant*, Bank of Spain, Madrid, Spain. Research assistant for Laura Crespo.
- 2016 *Research Assistant*, Universidad Carlos III, Madrid, Spain. Research assistant for Carlos Santiago Caballero.

Working Papers

- “The equilibrium effects of state-mandated minimum staff-to-child ratios”, job market paper.
- “Identification and Estimation of non-stationary hidden Markov models”, this paper won first place in the Department of Economics Third-Year Paper competition at the University of Minnesota.
- “The impact of measurement error in health on health-related counterfactuals”, with Luis Perez, this paper won second place in the Department of Economics Third-Year Paper competition at the University of Minnesota.

Work in Progress

- “Heterogeneous effects of divorce on children's human capital”, with Joseph Mullins.
- “An anchor-independent non-parametric test of dynamic-complementarities in the production of children's skills”, with Joseph Mullins.
- “Neighborhood segregation and endogenous racial bias”, with Alessandra Fogli, Veronica Guerrieri and Marta Prato.

Referee Experience

Review of Economic Dynamics

Computer Skills

Julia, Matlab, Stata

Languages

Spanish (Native), Galician (Native), English (Fluent), German (Basic), Portuguese (Basic)

Abstract(s)

“The equilibrium effects of state-mandated minimum staff-to-child ratios,” job market paper

Minimum-mandatory-staff-to-child ratios are a common regulatory tool in the US that varies significantly across states. Empirical evidence suggests that minimum-mandatory-staff-to-child ratios impact the market provision of childcare quantity and quality. Yet, little is known about their impact on the skills of children. This paper builds an equilibrium model of the childcare market and uses it to simulate the distribution of children's skills at preschool entry under various minimum-mandatory-staff-to-child ratios. The model allows for rich family heterogeneity, an endogenous distribution of childcare quality at each age, and endogenous wages that clear the market for teachers and childcare workers. I prove identification and estimate the model using both individual-level and state-level data. Counterfactual simulations show that changes in minimum-mandatory-staff-to-child ratios have a modest effect on the wages of early childhood educators. In contrast, they have very heterogeneous effects on children's skills.

“Identification and Estimation of non-stationary hidden Markov models”

This paper provides a novel constructive identification proof for non-stationary Hidden Markov models. The identification result establishes that only two periods of time are required if one wants to identify transition probabilities between those two periods. This is achieved by using three conditionally independent noisy measures of the hidden state. The paper also provides a novel estimator for non-stationary hidden Markov models based on the identification proof. Montecarlo experiments show that this estimator is faster to compute than maximum likelihood, and almost as precise for large enough samples. Both the estimator and the identification proof are robust to two deviations to the hidden Markov framework. The identification proof and the estimator recover meaningful parameters without specifying the whole distribution of all the observables and when the first-order Markov assumption for the hidden state is not satisfied. Moreover, I show how my identification proof and my estimator can be used in two different relevant applications: Identification and estimation of Conditional Choice Probabilities, initial conditions and laws of motion in dynamic discrete choice models when there is an unobservable state; and identification and estimation of the production function of cognitive skills in a child development context when skills and investment are unobserved.

“The impact of measurement error in health on health-related counterfactuals” , with Luis Perez

Health is typically imperfectly measured. How important is this imperfect observability to evaluate the costs of bad health? We estimate a dynamic, structural life-cycle model of savings and labor supply with health risk under two assumptions on the observability of health. The first one, which is prevalent in much of the literature, is that health is perfectly observable. The second one is that, while health is not observable, a battery of noisy measures of health is available to the researcher. We find that ignoring measurement error in health leads to substantially underestimating both the persistence of health and the time costs of being unhealthy. Ultimately, measurement error has an effect on the estimated lifetime costs of bad health---as measured by labor earnings, hours worked, consumption, and assets---leading to underestimate these by as much as 300%. A key message of our paper is that estimating the lifetime costs of bad health using structural economic models requires researchers to worry about measurement error in health.