Senan Hogan-Hennessy

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Doctoral Studies	Cornell University Ph.D. Economics Fields: Labour economics, applied econometrics.	(in progress) 2020–2026

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Prior Education	Pomona College, USA B.A. Economics + mathematics	2018

Citizenship	Great Britain, Ireland.	**Gender:** Male.

Languages	English (native).

Teaching Experience	Intro to labour economics (undergraduate, Cornell course ILRE–2400) Teaching assistant to Professor Stephanie Thomas.	2024
	Applied econometrics (graduate, Cornell course ECON–6590) Teaching assistant to Professor Douglas Miller.	2022
	Econometrics (undergraduate, Pomona College course ECON–167) Teaching assistant to Professor Pierangelo De Pace.	2017–2018
	Microeconomic theory (undergraduate, Pomona College course ECON–101) Teaching assistant to Professor John Clithero.	2016

Research Experience	Research Assistant, Cornell University	2021–2026.
	Professor Seth Sanders (Econ), 2025–2026.	
	Professor Chris Barrett (Dyson), 2023–2024.	
	Professor Louis Hyman (ILR), 2021.	
	Data Science Intern, The Behaviouralist (London UK)	2020
	Professors Robert Metcalfe and Robert Hahn.	
	Research Associate, Harvard Business School	2019
	Professor Daniel Gross.	

Awards	Research Seed Grant, Cornell Center for the Study of Inequality	2024
	Small Labour Grant, Cornell University ILR	2024
	Conference Travel Grant, Cornell University Graduate School	2023, 2024, 2025
	Sage Fellowship, Cornell University	2020, 2024
	Lorne D Cook Memorial Award, Pomona College	2018
	Distinction in Undergraduate Thesis, Pomona College	2018
	Sutton Trust — Fulbright Programme, London UK	2013–2014

Professional	**Presentations:**	
	European Economic Association Annual Congress, Bordeaux France	2025
	Econometric Society World Congress, Seoul Korea	2025
	European Association of Labour Economists Conference, NHH Norway	2024
	Economics Department Alumni Conference, Cornell University	2024
	Eastern Economic Association Annual Meeting, Boston USA	2024
	Center for the Study of Inequality, Cornell University	2024
	Labour Work in Progress Seminar, Cornell University	2021, 2022, and so on.

Research Papers

The Direct and Indirect Effects of Genetics and Education (2025, JMP).
(Draft forthcoming)
Recent genetic research has shown that genes matter for education and labour market outcomes, but has little to say on the economic mechanisms beneath these findings. I use plausibly random deviation from parents as a natural experiment for the Education PolyGenic Index (Ed PGI) to estimate causal effects of genes associated with years of education, using data from the UK Biobank. I then decompose these genetic effects into a direct genetic effect and indirect education pathway using a causal mediation framework that allows for selection-into-education, using multiple UK university openings in the 1960s as instruments for higher education attendance. The Ed PGI increases labour market earnings through higher education attendance, with direct genetic effects indistinguishable from zero — contradicting previous speculation that education-linked genes independently increase intelligence or other labour market traits. Education linked genes are more about returns to higher education, and less about direct genetic effects. These findings reframe social science genetics by shifting focus from asking "if genes matter" to "how genes matter" — not as deterministic forces, but as factors that influence human capital decisions within institutional constraints. By using causal methods that explicitly account for individual choice, rather than assuming genetic determinism, this research provides a richer understanding of how biological inheritance, personal agency, and institutional structures interact to shape labour market inequality.

Causal Mediation in Natural Experiments (2025).

Natural experiments are a cornerstone of applied economics, providing settings for estimating causal effects with a compelling argument for treatment ignorability. Applied researchers often investigate mechanisms behind treatment effects by controlling for a mediator of interest, alluding to Causal Mediation (CM) methods for estimating direct and indirect effects (CM effects). This approach to investigating mechanisms unintentionally assumes the mediator is quasi-randomly assigned — in addition to the quasi-random assignment of the initial treatment. Individuals' choice to take (or refuse) a mediator based on costs and benefits is inconsistent with mediator ignorability, suggesting in-practice estimates of CM effects are biased in natural experiment settings. I solve for explicit bias terms when the mediator is not ignorable, imitating classical selection bias for average causal effects. I consider an alternative approach to credibly estimate CM effects, when selection-into-mediator is driven by unobserved costs and benefits. The approach uses a control function adjustment, relying on mediator take-up cost as an instrument. Simulations confirm that this method corrects for selection bias in conventional CM estimates, providing both parametric and semi-parametric methods. This approach gives applied researchers an alternative method to estimate CM effects when they can only establish a credible argument for quasi-random assignment of the initial treatment, and not a mediator, as is common in natural experiments.

Less Funding, More Lecturers, and Fewer Professors (2024).

Public universities employ more lecturers and fewer professors today than at any other point in the last thirty years, relative to student enrolment. At the same time, state funding for higher education has stagnated. This paper shows that the decline in state funding led to a substitution away from professors toward lecturers at US public universities. Using a shift-share approach to instrument for state funding, I find that universities employ 4.4% more lecturers per student following a 10% funding cut. This shift is accompanied by a reduction in assistant and full professors by 1.4% and 1.2% per student, respectively. These effects are concentrated to 1990–2009, with waning national trends for 2010 and onwards. Incumbent professors' salaries, promotion rates, and quit rates at Illinois universities remain unaffected by large funding cuts in the 2010s, indicating that the substitution arose from limiting the hiring of new professors. Stagnating state funding impacts public universities and faculty, likely contributing to deteriorating student outcomes at public universities since the 1990s.

Food Insecurity Among Military Veterans (2025).

Joint with Seungmin Lee (Notre Dame), Chris Barrett, John Hoddinott (Cornell), Matthew Rabbitt (USDA).
(Draft Forthcoming)

Other   **Personal Interests**: Yoga, road cycling, open source software.
Programming: R, Python, Bash, LaTeX.