MIT Economics

AARON GOODMAN

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DOCTORAL STUDIES

Massachusetts Institute of Technology (MIT)
PhD, Economics, Expected completion June 2022
DISSERTATION: "Essays in Education Finance"

DISSERTATION COMMITTEE AND REFERENCES

Professor David Autor
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Professor James Poterba
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PRIOR EDUCATION

Dartmouth College 2015
AB in Economics (High Honors) and Government (High Honors)
Summa Cum Laude

CITIZENSHIP United States **GENDER** Male

LANGUAGES English (native), French (competent)

FIELDS Primary Field: Public Finance

Secondary Fields: Education, Household Finance

TEACHING EXPERIENCE	Economics and Psychology (undergraduate, MIT course 14.13) Teaching Assistant to Professor Frank Schilbach	2020
	Econometric Data Science (undergraduate, MIT course 14.32) Teaching Assistant to Professor Anna Mikusheva	2019
	Advanced Research and Communication (graduate, MIT course 14.192) Teaching Assistant to Professors Esther Duflo and Stephen Morris	2019
	Topics in Money and Finance (undergraduate, Dartmouth course ECON 46) Teaching Assistant to Professor Bruce Sacerdote	2015
	Econometrics (undergraduate, Dartmouth course ECON 20) Study Group Leader for Professor Ethan Lewis	2012-2015
RELEVANT POSITIONS	Research Assistant to Professor Jonathan Parker	2018-2020
	Research Assistant to Professor Emil Verner	2018
	Analyst, Cornerstone Research	2015-2017
	Research Assistant to Professor Brendan Nyhan	2013-2014
FELLOWSHIPS, HONORS, AND AWARDS	Jerry A. Hausman Graduate Dissertation Fellowship	2021-2022
	George and Obie Shultz Fund Grant	2019
	National Science Foundation Graduate Research Fellowship	2017-2022
	Jonathan B. Rintels Prize (best thesis in the social sciences)	2015
	Lewis H. Haney Prize (best Economics thesis)	2015
	Bennett Essay Prize (best thesis in political theory)	2015
	Nelson A. Rockefeller Prize (best overall Economics major)	2015
	Phi Beta Kappa (early induction, top 20 in class)	2014
	Rufus Choate Scholar (top 5% in class)	2011-2015
	Best Undergraduate Paper on the Presidency (American Political Science Association)	2014
PROFESSIONAL ACTIVITIES	Referee for *American Economic Review: Insights*	
	MIT Public Finance Lunch organizer	2020-2021
	Presentations:	
	International Association for Applied Econometrics Annual Conference, International Institute of Public Finance Annual Congress, Washington University in St. Louis Economics Graduate Student Conference	2021

RESEARCH PAPERS

"Interstate Competition in Higher Education and the Allocation of Financial Aid" (Job Market Paper)

In the American higher education structure, public universities are funded and operated at the state level. I present theoretical and empirical evidence that the resulting competition between state university systems causes socially costly distortions to the allocation of financial aid among undergraduate students. In a

model drawing intuition from the traditional tax competition literature, I demonstrate that business-stealing incentives lead states to provide less need-based and more merit-based aid than a national social planner who seeks to maximize aggregate college attendance. To permit empirical tests of the model, I derive additional comparative statics relating equilibrium aid allocation to students' interstate migration costs: when migration is easier and states are able to compete more intensely for each other's students, they move further from socially optimal policy by decreasing need-based and increasing merit-based funding. Using student-level financial aid data and a variety of measures – geographic distance, membership in tuition reciprocity agreements, and annual university rankings – to proxy for students' migration costs, I find broad confirmatory evidence that heightened competition shifts aid dollars away from need-based grants and low-income students. A quantification exercise suggests that college-attendance rates would increase by 7-11 percentage points for low-income students and by 2-3 percentage points overall under socially optimal financial aid policy.

"Modeling the Spending and Welfare Effects of School Finance Reforms"
School districts in the United States rely on both funding from state governments and their own local tax collection. The dual nature of education funding complicates the analysis of school finance policy, since districts can adjust their local revenue collection in response to state funding changes and use accumulated savings buffers to divorce spending choices from current revenue levels. Focusing on the helpful institutional setting in the state of Ohio, I address this challenge and develop a method to evaluate the long-run consequences of school finance reforms. I first build a dynamic model of school district behavior and validate its reduced-form predictions about levy-proposal and spending-saving decisions. I then estimate the model, leveraging the large amount of annual variation in districts' financial resources caused by historical volatility in state aid and a unique state law freezing the nominal value of local property tax revenue. The structural estimates allow me to simulate individual districts' reactions to state funding changes and compute the resulting spending and welfare effects of counterfactual policy reforms. Differences in districts' estimated preferences and initial financial conditions create substantial heterogeneity in the behavioral responses that determine the ultimate pass-through effect of state funding changes on spending levels. By targeting districts with the most favorable behavioral responses and the highest valuations of marginal funds, budget-neutral reallocations of state aid can attain welfare increases equal to 4% of Ohio's current education expenditures.

"Arbitrage in the Binary Option Market: Distinguishing Behavioral Biases" (with Indira Puri)
In the first empirical analysis of the binary option market, we show that U.S. retail traders forgo clear arbitrage opportunities by purchasing binary options when strictly dominant portfolios of traditional call options are available at lower prices. Using a yearlong sample of binary option trades, we find that 19% of S&P index, 21% of gold, and 25% of silver trades violate our no-arbitrage condition. The amount of money lost is large, as buyers of binary options on average lose

about a third of the contract price by forgoing the dominating call option portfolio. After rejecting standard institutional justifications for the existence of arbitrage, including random price volatility and various forms of trading costs, we examine possible behavioral explanations. We show that our results cannot be explained by canonical behavioral models such as prospect theory or cumulative prospect theory. Instead, we rationalize our findings with a novel behavioral model in which investors prefer simple binary lotteries to more complicated sets of outcomes. An online survey of binary option traders supplements our analysis of market data, providing direct evidence that a "preference for simplicity" is more common among these traders than prospect theory preferences.

"Simple Allocation Rules and Optimal Portfolio Choice Over the Lifecycle"
(with Victor Duarte, Julia Fonseca, and Jonathan Parker)
We develop a machine-learning algorithm to solve for optimal portfolio choice in a detailed and quantitatively accurate lifecycle model that includes many features of reality modeled only separately in previous work. We use the quantitative model to evaluate the consumption-equivalent welfare losses from using simple rules for portfolio allocation across stocks, bonds, and liquid accounts instead of the optimal portfolio choices. We find that the consumption-equivalent losses from using an age-dependent rule as embedded in current target-date/lifecycle funds (TDFs) are substantial, around 3% of consumption, despite the fact that TDF rules mimic average optimal behavior by age closely (until retirement). The TDF portfolio does not improve on investing a constant 2/3 share in equity. Finally, optimal equity shares have substantial heterogeneity, particularly by wealth level and dividend-price ratio, implying substantial gains to further customization of advice or TDFs, particularly in these dimensions.