

# BENEDICT GUTTMAN-KENNEY

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## Education

2018 - June 2024 (*Expected*) University of Chicago Booth School of Business  
Ph.D. Economics Candidate, M.B.A., Bradley Fellow  
- Committee Co-Chairs: Professors Matthew J. Notowidigdo & Neale Mahoney.  
- Committee Members: Professors Constantine Yannelis & Scott Nelson.  
- I will be on the finance & economics job markets for the 2023-24 academic year.

2011 - 2012 University College London  
MSc Economic Policy

2008 - 2011 University of Warwick  
BSc Economics

## Research Fields

Household Finance, Behavioral Economics, Public Economics.

## Affiliations

2016 - 2018 Financial Conduct Authority (FCA), Senior Economist

2012 - 2016 FCA, Economist

2015 Federal Reserve Bank of New York, Seconded National Expert (from FCA)

2010 Bank of England, Summer Intern

## Research Grants

2022 George J. Stigler Center for the Study of the Economy and the State  
- PhD Dissertation Award & Bradley Fellow

2020 Fama-Miller Centre for Research in Finance, John & Serena Liew Fellowship Fund

2022 & 2019 Chicago Booth PhD Research Grants

## Invited Courses

2022 [NBER Behavioral Public Economics Boot Camp](#)  
- Organized by Professors Hunt Allcott, Doug Bernheim, & Dmitry Taubinsky

2022 [Russell Sage Foundation Summer Institute in Behavioral Economics](#)  
- Organized by Professors David Laibson & Matthew Rabin

## Presentations

**2023:** Federal Reserve Bank of Philadelphia (*scheduled*), Dvara Research (*scheduled*), RAC Foundation Annual Meeting (*scheduled*), Chicago Booth (Behavioral, Finance) (*scheduled*), Stigler Center, FinRegLab. **2022:** Association for Consumer Research (ACR), ISMS Marketing Science Conference, Equifax Global BNPL working group, Chicago Booth (Behavioral, Finance, Microeconomics x2), NatWest Group Event on BNPL Lending, Indian School of Public Policy, Federal Reserve Bank of Kansas City Industry Roundtable on BNPL Lending, Society for Consumer Psychology (SCP) Annual Meeting, Harvard Kennedy School Roundtable on BNPL Lending Regulation. **2021:** Chicago Booth (Finance, Microeconomics), Boulder Summer Conference On Consumer Financial Decision Making. **2020:** #EconTwitter Virtual Finance + Economics Conference, Chicago Booth (Microeconomics). **2019:** Federal Deposit Insurance Corporation (FDIC) Consumer Research Symposium, Consumer Financial Protection Bureau (CFPB) Research Conference, RAND Behavioral Finance (BeFi) Forum. **2018:** Advances with Field Experiments Conference. **2016:** NBER Summer Institute - Household Finance (co-author presented), Network for Integrated Behavioral Science (NIBS) Conference, University of Essex, University of Stirling Workshop. **2015:** NBER Summer Institute 2015 - Law & Economics (co-author presented), Federal Reserve Bank of New York (FRBNY).

## Chair

2023 American Economics Association (AEA) Annual Meeting: Organizer & Chair of Panel on Consumer Credit Reporting Data

2022 RAND Behavioral Finance Forum: Organizer & Chair of Panel on Buy Now, Pay Later (BNPL)

2020 The Empirics and Methods in Economics Conference (EMCON): Organizer & Chair of Finance Session

## Discussant

2022 American Real Estate & Urban Economics Association (AREUEA) Annual Meeting - [Slides](#) discussing Tracey & Van Horen (2021)

## Posters

2022 American Finance Association (AFA) Annual Meeting, 2022 Society for Judgement and Decision Making (SJDM) Annual Meeting, International Conference on Credit Risk Evaluation: CREDIT 2021 “Compound Risk: Climate, Disaster, Finance, Pandemic”

## Student Workshops

2022 - 2023 Chicago Booth Behavioral Economics Lab Group  
- Run by Devin Pope, Alex Imas, Josh Dean, & Avner Strulov-Shlain (launched in 2022)

2021 - 2023 Chicago Booth Microeconomics Student Brownbag (Faculty & student attend - launched in 2021)

2019 - 2023 Chicago Booth Finance Student Brownbag (Faculty & student attend)

## Publications

[How Do Payday Loans Affect Borrowers? Evidence From the U.K. Market](#) (2019) With John Gathergood and Stefan Hunt. *Review of Financial Studies*, 32 (2): 496–523. Reprinted in [Society for Financial Studies Virtual Issue: Debt](#).

Payday loans are controversial high-cost, short-term lending products, banned in many U.S. states. But debates surrounding their benefits to consumers continue. We analyze the effects of payday loans on consumers by using a unique data set including 99% of loans approved in the United Kingdom over a two-year period matched to credit files. Using a regression discontinuity research design, our results show that payday loans provide short-lived liquidity gains and encourage consumers to take on additional credit. However, in the following months, payday loans cause persistent increases in defaults and cause consumers to exceed their bank overdraft limits.

[Buy Now, Pay Later \(BNPL\) ...On Your Credit Card](#) (2023) With Chris Firth and John Gathergood. *Journal of Behavioral & Experimental Finance*, 37, 100788. Summarized in [Chicago Booth Review](#) and my [op-ed on BNPL](#).

We provide the first economic research on ‘buy now, pay later’ (BNPL): an unregulated FinTech credit product enabling consumers to defer payments into interest-free instalments. We study BNPL using UK credit card transaction data. We document consumers charging BNPL transactions to their credit card. Charging of BNPL to credit cards is most prevalent among younger consumers and those living in the most deprived geographies. Charging a 0% interest, amortizing BNPL debt to credit cards – where typical interest rates are 20% and amortization schedules decades-long – raises doubts on these consumers’ ability to pay for BNPL. This prompts a regulatory question as to whether consumers should be allowed to refinance their unsecured debt.

[Default Effects of Credit Card Minimum Payments](#) (2022) With Hiroaki Sakaguchi, Neil Stewart, John Gathergood, Paul Adams, Lucy Hayes and Stefan Hunt. *Journal of Marketing Research*, 59 (4): 775–796.

Summarized in Chicago Booth Review [Article](#) & [Video](#).

Credit card minimum payments are designed to ensure that individuals pay down their debt over time, and scheduling minimum automatic repayments helps to avoid forgetting to repay. Yet minimum payments have additional, unintended psychological default effects by drawing attention away from the card balance due. First, once individuals set the minimum automatic repayment as the default, they then neglect to make the occasional larger repayments they made previously. As a result, individuals incur considerably more credit card interest than late payment fees avoided. Using detailed transaction data, we show that approximately 8% of all of the interest ever paid is due to this effect. Second, manual credit card payments are lower when individuals are prompted with minimum payment information. Two new interventions to mitigate this effect are tested in an experiment, prompting full repayment and prompting those repaying little to pay more, with large counter effects. Hence, shrouding the minimum payment option for automatic and manual payments and directing attention to the full balance may remedy these unintended effects.

**Do Nudges Reduce Borrowing and Consumer Confusion in the Credit Card Market?** (2022) With Paul Adams, Lucy Hayes, Stefan Hunt, David Laibson and Neil Stewart. *Economica*, 89 (S1): S178–S199.

Summarized in Chicago Booth Review [Article](#) & [Video](#).

We study nudges that turn out to have precise null effects in reducing long-run credit card debt. We test nudges across two field experiments covering 183,441 UK cardholders. Our first experiment studies nudges added to monthly credit card statements. Our second experiment studies letters and email nudges (separate from monthly statements) sent to cardholders who signed up to automatically pay the minimum required payment. In a follow-up survey to our second experiment, we find that 96% of respondents underestimate the time it would take to fully repay a debt if the cardholder made only the minimum required payment. The nudges reduce this confusion, but underestimation remains overwhelmingly common.

**Tracking and Stress-Testing U.S. Household Leverage** (2018) With Andreas Fuster and Andrew Haughwout. *Economic Policy Review*, 24 (1): 35–63. ([Updated data](#)).

Summarized in [Liberty Street Economics](#) blog.

Borrowers’ housing equity is an important component of their wealth and a critical determinant of their vulnerability to shocks. In this paper, we create a unique data set that enables us to provide a comprehensive look at the ratio of housing debt to housing values what we refer to as household leverage at the micro level. An advantage of our data is that we are able to study the evolution of household leverage over time and locations in the United States. We find that leverage was at a very low point just prior to the large declines in house prices that began in 2006, and rose very quickly thereafter, despite reductions in housing debt. As of early 2016, leverage statistics are approaching their pre-crisis levels, as house prices have risen more than 30 percent nationally since 2012. We use our borrower-level leverage measures and another unique feature of our data updated borrower credit scores to conduct ‘stress tests’: projecting leverage and defaults under various adverse house price scenarios. We find that while the riskiness of the household sector has declined significantly since 2012, it remains vulnerable to very severe house price declines.

## COVID-19 Research

**Trends in Medical Debt During the COVID-19 Pandemic** (2022)

With Raymond Kluender, Neale Mahoney, Francis Wong, Xuyang Xia and Wesley Yin.

*JAMA Health Forum*, 3(5): e221031. Summarized in Chicago Booth Review [Article](#).

We use credit reporting data to study medical debt during the COVID-19 pandemic. Medical and non-medical debt followed pre-pandemic trends during the COVID-19 pandemic. We found no evidence of a net association between the COVID-19 pandemic and medical debt, overall or across areas with different incomes and pandemic severity.

**The English Patient: Evaluating Local Lockdowns Using Real-Time COVID-19 & Consumption Data** (2021) With John Gathergood. *CEPR Covid Economics*, 64: 73-100. Summarized in [Economics Observatory](#) and [Chicago Booth Review](#).

We find UK “local lockdowns” of cities and small regions, focused on limiting how many people a household can interact with and in what settings, are effective in turning the tide on rising positive COVID-19 cases. Yet, by focusing on household mixing within the home, these local lockdowns have not inflicted the large declines in consumption observed in March 2020 when the first virus wave and first national lockdown occurred. Our study

harnesses a new source of real-time, transaction-level consumption data that we show to be highly correlated with official statistics. The effectiveness of local lockdowns are evaluated applying a difference-in-difference approach which exploits nearby localities not subject to local lockdowns as comparison groups. Our findings indicate that policymakers may be able to contain virus outbreaks without killing local economies. However, the ultimate effectiveness of local lockdowns is expected to be highly dependent on co-ordination between regions and an effective system of testing.

**Levelling Down and the COVID-19 Lockdowns: Uneven Regional Recovery in UK Consumer Spending** (2021) With John Gathergood, Fabian Gunzinger, Edika Quispe-Torreblanca & Neil Stewart. *CEPR Covid Economics*, 67: 24-52.

Summarized in [Economics Observatory](#) and [Chicago Booth Review](#).

We show the recovery in consumer spending in the United Kingdom through the second half of 2020 is unevenly distributed across regions. We utilise a real-time source of consumption data that is a highly correlated, leading indicator of Bank of England and Office for National Statistics data. The UK's recovery is heavily weighted towards the "home counties" around outer London and the South. We observe a stark contrast between strong online spending growth while offline spending contracts. The strongest recovery in spending is seen in online spending in the "commuter belt" areas in outer London and the surrounding localities and also in areas of high second home ownership, where working from home (including working from second homes) has significantly displaced the location of spending. Year-on-year spending growth in November 2020 in localities facing the UK's new tighter "Tier 3" restrictions (mostly the midlands and northern areas) was 38.4% lower compared with areas facing the less restrictive "Tier 2" (mostly London and the South). These patterns had been further exacerbated during November 2020 when a second national lockdown was imposed. To prevent such COVID-19-driven regional inequalities from becoming persistent we propose governments introduce temporary, regionally-targeted interventions in 2021. The availability of real-time, regional data enables policymakers to efficiently decide when, where and how to implement such regional interventions and rapidly evaluate their effectiveness to consider whether to expand, modify or remove them.

## Working Papers

**The Semblance of Success in Nudging Consumers to Pay Down Credit Card Debt** (2023) With Paul Adams, Stefan Hunt, David Laibson & Neil Stewart. *Submitted*.

We show a nudge causing large proximate effects on consumer choices did not translate into distal effects on real economic outcomes. Our field experiment finds a credit card nudge – shrouding the Autopay option to pay only the minimum due and increasing the salience of an alternative Autopay option to automatically amortize debt faster – has large proximate effects on Autopay enrollment but no distal effects on reducing debt. This contrast between proximate and distal outcomes is explained by liquidity constraints and three offsetting consumer responses: choosing 'low' Autopay amounts, lower manual payments, and lower Autopay enrollment increasing missed payments.

**Weighing Anchor on Credit Card Debt** (2018) With Jesse Leary and Neil Stewart. (Poster, Slides).

We find it is common for consumers who are not in financial distress to make credit card payments at or close to the minimum. This pattern is difficult to reconcile with economic factors but can be explained by minimum payment information presented to consumers acting as an anchor that weighs payments down. Building on Stewart (2009), we conduct a hypothetical credit card payment experiment to test an intervention to de-anchor payment choices. This intervention effectively stops consumers selecting payments at the contractual minimum. It also increases their average payments, as well as shifting the distribution of payments. By de-anchoring choices from the minimum, consumers increasingly choose the full payment amount which potentially seems to act as a target payment for consumers. We innovate by linking the experimental responses to survey responses on financial distress and to actual credit card payment behaviors. We find that the intervention largely increases payments made by less financially-distressed consumers. We are also able to evaluate the potential external validity of our experiment and find that hypothetical responses are closely related to consumers' actual credit card payments.

### Selected Works-in-Progress

**Flag Tag: Credit File Disaster Flags As Social Insurance Tags** (Poster, Slides). Summarized in [Chicago Booth Review](#).

This paper finds 59.2 million people had a 'disaster flag' on their US credit file (2010 - 2020) with broad geographical use during the COVID-19 pandemic. Disaster flags mask adverse credit file data with the aim of protecting credit access following disasters such as hurricanes & wildfires. Flags are voluntarily applied by lenders to borrowers' credit files. I describe the selection of lenders and borrowers into applying these flags over twenty years and estimate the effects of flags on credit access using a difference-in-difference design. There is adverse selection into flag use: people using flags are ex-ante riskier and defaults masked by flags are riskier than non-flagged defaults. Among those selecting into flags, I find small average effects of flags on credit scores (1.5-2pp) driven by larger (10-15pp), temporary effects for those with pre-disaster defaults or subprime credit scores. Finally, the paper considers a counterfactual social insurance regime automatically masking all new defaults during natural disasters and finds doing so would have limited predictive loss.

**A Share Too Far: How Data Innovation Unraveled U.S. Credit Card Information Sharing** With Andrés Shahidinejad.

We show how an innovation ("trended data") that enhanced consumer credit reporting data led to an inefficient market unravelling. Trended data uses credit card payment information to reveal consumers' behavioral types and improved lenders' credit risk measurement. Approximately half of US credit cards stopped sharing payment information with credit reporting agencies after trended data's introduction. Credit card lenders who stop sharing are adversely selected. We understand unraveling theoretically and empirically as the net benefits from sharing are heterogeneous across lenders. Lenders with market power stop sharing to prevent highly profitable consumers being poached by their competitors. Finally, we use a difference-in-differences design to estimate the causal effects of trended data & the unraveling in reporting upon consumer credit access.



## **Evaluating Hard Paternalism: Evidence from Quebec Tightening Credit Card Minimum Payment Requirements** With Jason Allen & Michael Boutros.

We evaluate the trade-offs of hard paternalistic financial regulation designed to reduce indebtedness. We do so exploiting a series of government policies tightening credit card minimum payments in Quebec that left minimum payments unchanged in the rest of Canada. We estimate the causal effects of these policies across heterogeneous consumers, credit card lenders, and market equilibrium outcomes combining a difference-in-differences methodology with consumer credit reporting data covering all Canadian credit cards.

## **A Guide to Consumer Credit Reporting Data** With Christa Gibbs, Donghoon Lee, Scott Nelson, Wilbert Van der Klauuw & Jialan Wang. ([AEA Slides](#)).

This paper is a guide for using consumer credit reporting data. We document how the use of these data has been rapidly increasing since the 2000s for research in household finance, macroeconomics, health and aging, public economics, and an expanding number of topics. We provide institutional details on how these data are constructed, discuss challenges to be aware of, and offer guidance on best practices to address these issues. We highlight how economically important measures can be constructed for these data using leading examples from the literature. Finally, we discuss open issues including the potential gains from merging these data with other sources.

## **Dynamic Heuristics: Consumer Responses to Gas Prices**

## **Access to Credit & Credit Invisibility** With Tony Cookson & Will Mullins.

### **Teaching**

2023 (*scheduled*): Chicago Booth MBA Course: Consumer Finance, Professor Scott Nelson  
- Teaching Assistant

2022: University of Chicago Booth School of Business & Becker Friedman Institute: Lecture introducing consumer credit reporting data to approximately 60 Research Professionals and Principal Researchers employed across the University of Chicago's Economics, Booth School of Business, and Harris School of Public Policy.

2022: Guest Lecturer, [Harris Lecture Series at the Indian School of Public Policy \(ISPP\)](#).  
- My lecture covered my COVID-19 research. It was one of ten in a series "Reimagining the post-Covid Roles of State and Markets" to Masters Students as part of collaboration with the University of Chicago Harris School of Public Policy. Other lecturers included tenured Economics Professors Chris Blattman and Michael Kremer (Nobel prize winner).

2021, 2022: Chicago Booth PhD Course: Pre-Economics Camp, Professor Daniel Bartels  
- Instructor. Designed & led introduction to microeconomics for Behavioral Science PhDs

2021, 2022: Chicago Booth PhD Course: Economics Camp, Professor Emir Kamenica  
- Teaching Assistant for Behavioral Science PhDs

2020, 2021: Chicago Booth MBA Course: Competitive Strategy, Professor Thomas Covert  
- Teaching Assistant (x2 sections each year)

2020 - Present: TransUnion Subject Matter Expert: Created and maintain depository on Chicago Booth's TransUnion credit reporting data. Role includes answering institutional details on these data.

## Reading Groups Organized

2021 Chicago Booth Household Finance Summer PhD Reading Group (with Lucy Msall & Michael Varley)

2020 Household Finance PhD Reading Group - on zoom with PhDs across institutions

## Refereeing

*Journal of Financial and Quantitative Analysis (JFQA)*, *Finance Research Letters*, *Applied Economics Letters*, *Nature: Humanities and Social Sciences Communications*, *International Journal of Central Banking*, *Cogent Economics & Finance*, *Digital Health*

## Data Assets Created

- Co-created (with Tom Crossley, Annette Jäckle & Jesse Leary) credit file data merged with the existing UK nationally-representative longitudinal household panel (Understanding Society). Collaboration between the Financial Conduct Authority, the Institute for Social and Economic Research (ISER) at the University of Essex and Economic and Social Research Council (ESRC). Version of merged data scheduled to be publicly deposited on UK Data Archive.
- Created dataset of UK credit cards to evaluate effects of series of field experiments for regulatory use by Financial Conduct Authority. These credit card data were merged with credit files as well as an accompanying consumer survey (which I also designed).
- Created the first panel of UK credit file data for regulatory use by Financial Conduct Authority & Bank of England. This was designed as a UK version of the Federal Reserve Bank of New York's Consumer Credit Panel.
- Designed 2016 consumer survey of UK payday lending market for regulatory use by Financial Conduct Authority.
- Co-created (with John Gathergood & Stefan Hunt) dataset of UK payday lending market (2012 - 2018) covering loan applications and originations and merged to credit files for regulatory use by Financial Conduct Authority.
- Designed (with Alessandro Nava, John Gathergood & Stefan Hunt) 2014 consumer survey of UK payday lending market for regulatory use by Financial Conduct Authority.

## Policy Research

Ad hoc advice to and collaborations with UK policymakers (Bank of England, Her Majesty's Treasury, Department for Business, Energy & Industrial Strategy, Cabinet Office, Office for National Statistics) - during COVID-19 pandemic this was through my role as a [TE](#) Research Fellow (2020 - 2022). [TE](#) is a UK Research & Innovation (UKRI) funded collaboration between academia and private data providers conducting research and providing real-time, regional data via a dashboard to UK policymakers.



## Buy Now Pay Later (BNPL)

- [Op-Ed on BNPL](#) “Buy Now, Pay Later...On Your Credit Card: A New Way Of Putting Off Payments” (25 March 2022) *The FinTech Times*.
- [Submission to Consumer Financial Protection Bureau \(CFPB\) inquiry on BNPL](#) (25 March 2022) With John Gathergood & Chris Firth.

## Regional Inequality

- [Levelling up: Designing policy to fit places](#) (28 November 2022) With John Gathergood, Sarah Hall, Paul Mizen, & Arif Sulistiono.
- [Levelling up live: Measuring local inequalities using real time data](#) (26 October 2021) With TE Research Team.
- [Where are the UK’s levelling up funds most needed?](#) (9 August 2021) With John Gathergood, Sarah Hall, & Arif Sulistiono. *Economics Observatory* blog.

## COVID-19

- [Local lockdown and regional recovery: what can real-time consumption data tell us?](#) (3 March 2021) *VoxEU / CEPR* interview.
- [How uneven is the recovery in consumer spending across UK regions?](#) (16 December 2020) With John Gathergood, Fabian Gunzinger, Edika Quispe-Torreblanca & Neil Stewart. *Economics Observatory* blog.
- [How can authorities control coronavirus without killing the economy?](#) (8 October 2020) with John Gathergood. *Economics Observatory* blog.

## Credit Cards

- [Helping credit card users repay their debt: a summary of experimental research](#) (July 2018) with Paul Adams, Lucy Hayes and Stefan Hunt. *FCA Research Note*. Summarizes *FCA Occasional Papers* No. [42](#), [43](#), [44](#), [45](#) that became academic papers.
- [Credit card market study annex 4: behavioural trials](#) (July 2016).

## Consumer Credit

- [Who’s driving consumer credit growth?](#) (8 January 2018) with Liam Kirwin and Sagar Shah. *Bank Underground* & *FCA Insight* blogs.
- [Preventing financial distress by predicting unaffordable consumer credit agreements: An applied framework](#) (July 2017) with Stefan Hunt. *FCA Occasional Paper* No. 28.
- [High-cost credit review technical annex 1: Credit reference agency \(CRA\) data analysis of UK personal debt](#) (July 2017).
- [Can we predict which consumer credit users will suffer financial distress?](#) (August 2016) with John Gathergood. *FCA Occasional Paper* No. 20.
- [Can financial distress be predicted or is that just life \(events\)?](#) (3 August 2016) with John Gathergood. *FCA Insight* blog.

## **Payday Loans (known in UK as high-cost short-term credit)**

- High-cost short-term credit price cap consumer research (June 2017). [Summary report](#) of survey results & [technical report on survey design](#).
- Call for input: high-cost credit including review of the high-cost short-term credit (HCSTC) price cap. Annex 3: technical annex: HCSTC market analysis January 2014 to June 2015 (November 2016).
- Detailed rules for the price cap on high-cost short-term credit including feedback on CP14/10 and final rules. Annex 3: Feedback (and our response) to our technical annex (supplement to CP14/10) (November 2014).
- High-cost short-term credit price cap: technical annex (July 2014).

## **Poverty**

- Academic advisor to UK Department of Work & Pensions on [developing a new UK poverty measure](#).

## **Research Evaluation Framework (REF) Impact**

- My research has been used in two impact case studies submitted by co-authors for their UK's university's Research Evaluation Framework 2021 (REF 2021). REF is a nationwide process of expert review that evaluates all UK universities' research quality and is used to allocate funding.
  - ["Shaping Consumer Financial Protection Policy in the United Kingdom \(2014 - 2020\)"](#) - Professor John Gathergood, University of Nottingham, Economics.
  - ["Informing the Financial Conduct Authority's Measures to Help Consumers Take Better Control of Their Spending \(2014 - 2020\)"](#) - Professor Neil Stewart, University of Warwick, Psychology.

## **Selected Media Coverage**

*The Financial Times (including front page), The Wall Street Journal, The Economist, Bank Underground, BBC You and Yours, BBC Today programme, Brookings Hutchins Roundup, Chicago Booth Review, CityAM, DS News, Economics Observatory, Fable Data blog, FCA Insight, Liberty Street Economics blog, LSE British Politics and Policy blog, Mashable, Payments Dive, Raconteur (The Times's Business Supplement), Reuters, Ritholtz, The Daily Telegraph, The FinTech Times, The Guardian, The Independent, The Observer, The Times, VoxEU/CEPR.*

## **Memberships**

*American Economic Association (AEA), American Finance Association (AFA), Society for Financial Studies (SFS), Society for Judgement and Decision Making (SJDM).*

## **Other Pre-PhD Training**

2017 [Incorporating more realistic psychology into economic analysis](#)

Taught by Matthew Rabin (Harvard) at the UK Institute for Fiscal Studies (IFS).

2016 FCA microeconometrics training at University College London (UCL). Taught by Frank Windmeijer (Bristol), Jeffrey Wooldridge (Michigan State) & Lars Nesheim (UCL).

2016 [John Hopkins University/Coursera Data Science Specialization](#)

2013 [Beyond Rationality: Behavioural Economics and the Modern Economy](#)

Taught by Matt Levy & Kristof Madarasz at the London School of Economics (LSE).

## **Citizenship**

British.

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