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WILLIAM MATCHAM
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LONDON SCHOOL OF ECONOMICS & POLITICAL SCIENCE

Department of Economics

Placement Officer: Professor Mark Schankerman +44 (0) 20 7955 7518

m.schankerman@lse.ac.uk

Placement Assistant: Emma Taverner

econ.mres.phd@lse.ac.uk

Contact Information:

Department of Economics
London School of Economics
Houghton Street
London, WC2A 2AE
Tel: +44 (0) 7722 573930
Email: w.o.matcham@lse.ac.uk

Citizenship: British

Pre-Doctoral Studies:

MRes Economics (Distinction), LSE	2016-2018
MSc Econometrics and Mathematical Economics (Distinction), LSE	2014-2015
BSc Econometrics and Mathematical Economics (First Class Honours), LSE	2011-2014

Doctoral Studies: London School of Economics 2018-2023 (Expected)

Thesis Title: "Essays in Household Finance and Innovation"

Thesis Supervisors and References:

Prof Alessandro Gavazza (Supervisor)
Department of Economics
London School of Economics
Houghton Street
London
WC2A 2AE
a.gavazza@lse.ac.uk
Tel. +44 (0) 20 7955 6128

Prof Mark Schankerman (Supervisor)
Department of Economics
London School of Economics
Houghton Street
London
WC2A 2AE
m.schankerman@lse.ac.uk
Tel. +44 (0) 20 7955 7518

Prof Daniel Paravisini (Advisor)
Department of Finance
London School of Economics
Houghton Street
London
WC2A 2AE
d.paravisini@lse.ac.uk
Tel. +44 (0) 20 7107 5371

Dr Tatiana Komarova (Advisor)
Department of Economics
London School of Economics
Houghton Street
London
WC2A 2AE
tatiana.komarova1@gmail.com
Tel. +44 (0) 20 7852 3707

Teaching and Research Fields:

Primary Fields: Household Finance, Industrial Organization
Secondary Fields: Econometrics, Innovation

Teaching Experience:

Graduate Courses:

EC443 Econometrics for MRes Students <i>TA for Tatiana Komarova</i>	2020-2021
MG411 Firms and Markets <i>TA for John Sutton</i>	2019-2021
EC475 Quantitative Economics <i>TA for Mark Schankerman</i>	2016-2020

Undergraduate Courses:

EC221 Principles of Econometrics <i>Course Manager for Marcia Schafgans</i>	2014-2022
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Relevant Positions Held:

Contractor, Financial Conduct Authority	2018-2022
Research Assistant for Alessandro Gavazza	2017-2019
Research Assistant for Mark Schankerman and Florian Schuett	2015-2016
Research Assistant for Mark Schankerman and Alberto Galasso	2013-2015
Research Assistant for Tatiana Komarova	2013-2014

Languages and Skills:

English (Native), Matlab, R, Python, and Stata

Honors, Scholarships and Fellowships:

Paul Woolley Centre Scholarship	2022-2023
Thomas Edison Innovation Fellowship	2022-2023
UChicago Becker Friedman Institute Price Theory Summer Camp	2019
LSE Excellence in Education Award	2019
Richard Karl Goeltz Scholarship	2016-2020
Ely Devons Prize, LSE MSc Econometrics and Mathematical Economics	2015
LSE Teaching and Learning Centre Prizes	2015-2022
Undergraduate Performance Prize, LSE BSc Econometrics and Mathematical Economics	2014

Research Papers:

Job Market Paper:

Risk-Based Quantity Limits in Credit Card Markets

Credit card lenders primarily individualize contracts through risk-based credit limits, not interest rates. To understand lenders' credit limit choices, I use novel statement-level data on the near-universe of UK credit cards active between 2010-2015 to estimate a structural model of the credit card market. The model explains differences in the shape of lenders' credit limit distributions through a screening technology, which gives lenders a noisy signal of customers' risk. I identify model parameters using a novel cost shock resulting from the April 2011 High Court case on the mis-selling of payment protection insurance. I use the estimated model to evaluate a counterfactual where lenders can freely individualize interest rates and credit limits, which the existing environment precludes. Individualized interest rates and credit limits emerge, profits increase, and borrowing becomes more dispersed as a result.

Other Papers:

The Patent Bazaar: Incentives and Screening in the U.S. Patent System, 2022

With Mark Schankerman

We develop and estimate a dynamic structural model of the patent screening process. The model incorporates incentives, intrinsic motivation and bargaining structure. We estimate the model using novel negotiation-round-level data on examiner decisions and text data from 24 million patent claims. From the claim text data, we use modern natural language processing methods to develop a new measure of patent distance. Our model estimates imply substantial variation in examiners' intrinsic motivation relative to examiners' time costs, with senior examiners less intrinsically motivated than juniors on average. With the estimated model, we calculate changes to timeliness and examination quality resulting from changes to agents' incentives and the bargaining structure. We find that a reduction in the number of negotiation rounds would improve both timeliness and quality of the patent screening process.

Multivariate Ordered Discrete Response Models, 2022

With Tatiana Komarova

We introduce multivariate ordered discrete response models that exhibit non-lattice structures. From the perspective of behavioral economics, these models correspond to broad bracketing in decision making, whereas lattice models, which researchers typically estimate in practice, correspond to narrow bracketing. There is also a class of hierarchical models, which nests lattice models. A special case of non-lattice models, hierarchical models correspond to sequential decision making and can be represented as binary decision trees. In each of these three cases, we specify latent processes as a sum of an index of covariates and an unobserved error, with unobservables for different latent processes potentially correlated. This additional dependence further complicates the identification of model parameters in non-lattice models. We provide conditions sufficient to guarantee identification under the independence of errors and covariates, compare these to identification conditions in lattice models, and outline an estimation approach. Finally, we provide simulations and empirical examples, with particular focus on probit specifications.