

# Matthew J. Walker

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## Education

Ph.D. Candidate in Economics, Durham University (ESRC studentship), expected August 2021.

Thesis Title: "Trust and Trustworthiness in Imbalanced Markets".

Committee: Prof. Jason Shachat (Lead), Prof. Daniel Zizzo, Dr. Kenju Kamei.

Visiting Scholar, The University of Texas at Dallas, Spring 2019.

Postgraduate Certificate Research Methods, *Distinction*, 2018.

MSc. Experimental Economics, *Distinction*, Durham University, 2017.

B.A.(Hons) Economics with Hispanic Studies, *First-Class Honours*, University of Nottingham, 2014.

Erasmus Study Abroad in Economics, University of Granada, 2012–2013.

## Research Interests

Behavioural and Experimental Economics, Auctions, Bargaining, Social Norms.

## Teaching Fields

Experimental Economics, Microeconomic Theory, Applied Econometrics.

## Research Papers

1. Walker, M.J. (2020). Trade Contingencies in Renegotiable Contracts.

**Abstract:** I analyse the effect of an arbitrator on the outcomes of renegotiable contracts allocated at a price-based procurement auction. If the seller has no contractual incentive to deliver high quality, trade is inefficient. It is shown that there exists a contingent contract, defined by the degree of contractual flexibility and the probability of arbitration, for which an efficient procurement outcome can be implemented in equilibrium. This contract exists independently of the arbitrator's preferences. The theoretical result holds so long as the cost of arbitration is low enough and the availability of an arbitrator is uncertain. I test the predictive power of the model in a controlled laboratory experiment with human subjects. Consistent with the theory, high quality is observed to be incentive compatible in the presence of an arbitrator. Yet a contingent contract cannot increase trade efficiency relative to a voluntary incentive arrangement. The arbitrator becomes a partial substitute for buyer reciprocity. There is evidence to suggest a significant fraction of buyers exhibit reference-dependent fairness preferences. The findings have implications for the establishment of welfare-enhancing trust between trade parties and efficiencies driven by competition.

2. Walker, M.J., Katok, E., & Shachat, J. (2020). Trust and Trustworthiness in Procurement Contracts.

**Abstract:** When product quality is unverifiable by third parties, and at the same time high quality is costly to provide, it becomes impossible to condition purchasing contracts on provided quality. In these situations, moral hazard flourishes when procurement is made through price-based reverse auctions. We use laboratory experiments with human subjects to investigate how incentives can be aligned to facilitate trust and trustworthiness in procurement contracts. To do this, we embed a retainage provision into the procurement contract and simulate a two-sided moral hazard environment. Retainage is a common incentive mechanism to insure against low quality in the construction industry. Crucially, it does not impose a requirement to condition price on quality. We observe that retainage can induce an economically significant improvement in product quality, as predicted by a model of fair payment norms. This improvement was realized at the cost of increased profit inequalities. Informal procurement arrangements, characterized by high retainage, led to a welfare-decreasing market unraveling over time. Our results imply that a retainage mechanism can mitigate the tension between competition and cooperation arising from reverse auctions. It is, however, unable to yield a Pareto improvement.

3. Guo, Y., Shachat, J., Walker, M.J. & Wei, L. (2020). Viral social media videos can raise pro-social behaviours when an epidemic arises. [ESI Working Paper 20-15](#).

**Abstract:** At the onset of an epidemic, can viral social media videos induce the high levels of trust and pro-sociality required for a successful community response? Shortly after the outbreak of the COVID-19 virus in Wuhan, China, we conducted an experiment assessing the impact of viral videos on individual preferences and pro-social behaviour. Prior to the experiment, participants viewed one of three videos culled from Chinese social media: a central government leader visiting a local hospital and supermarket, health care volunteers transiting to Wuhan, or an emotionally neutral video unrelated to the emergency. Viewing one of the first two videos leads to higher levels of pro-sociality and increased ambiguity aversion relative to the third video. The leadership video, however, induces lower levels of trust. Our results suggest ways to craft more effective crisis response efforts and provide insights into how the direction of information in hierarchies influences trust in community members.

## Research in Progress

1. Late Payments in Bertrand Competition (with Kyle Hyndman).

**Abstract:** We construct a signaling model to analyze how payment delays affect entry and pricing in Bertrand competition. We test the theoretical predictions in a controlled laboratory experiment with human subjects.

2. Fairness and Risk in Ultimatum Bargaining (with Kyle Hyndman). [AEA RCT Registry link](#).

**Abstract:** Using online experiments on Amazon Mechanical Turk, we investigate what constitutes a fair allocation of risk in ultimatum bargaining. There are two agents, a proposer and a responder. We are interested in how offer and acceptance decisions differ when the proposer offers a probabilistic allocation of an indivisible asset, versus the standard case in which the asset is divisible and the proposer proposes a deterministic surplus allocation. We are also interested in how the timing of the resolution of uncertainty affects behaviour.

3. Field Experience, Risk and Bidding in First-Price Auctions (with Ernan Haruvy and Timo Heinrich).

**Abstract:** We examine a new method of identifying subject risk preferences in first-price auctions by imposing a price ceiling on the opponent's bid space. We test the identifying restriction using online experiments on Amazon Mechanical Turk.

## Grants and Awards

ESRC National Productivity Investment Fund Doctoral Studentship Award 2017-2021 (No. ES/R500963/1).

Best Academic Performance in MSc. Experimental Economics Programme, Durham University, 2017.

Ustinov College Global Citizenship Scholarship Award, Durham University, 2016–2017.

## Academic Presentations

2020 Utah Experimental Economics Conference.

2019 The University of Texas at Dallas (LBOE seminar series),  
Behavioral Operations Conference (TU-Eindhoven).

## Workshop Participation

2020 Bargaining: Experiments, Empirics, and Theory (BEET).

2019 IFREE Graduate Student Workshop in Experimental Economics,  
Annual Texas Experimental Association Symposium.

2018 ZEW Workshop on Market Design (Mannheim).

2017 Experimetrics (Econometrics for Experimental Data, University of East Anglia).

## Professional Activities

Economic and Social Research Council peer review.

Research Chair for Economics, Durham University Doctoral Society, 2019–Present.

## Professional Memberships

Economic Science Association (2020–Present).

Royal Economic Society (2020–Present).

## Teaching and Research Assistant

### *Durham University*

Teaching Assistant, Dissertation in Economics (Undergraduate Year 3): 2019 – 2020, Stata Lectures and Econometric Help Sessions.

Teaching Assistant, Economic Methods (Undergraduate Year 1): Autumn 2019.

Research Assistant, Kenju Kamei, December 2017 – March 2018.

## Non-Academic Work Experience

Operations Analyst, Nomura International plc, London, September 2014 – June 2016.

## Miscellaneous

*Programming skills:* R, Stata, SPSS, oTree (Python/HTML), zTree, Qualtrics, L<sup>A</sup>T<sub>E</sub>X, Camtasia.

*Languages:* English (Native), Spanish (Fluent), Portuguese (Intermediate).