September 2020

Department of Economics and Finance Durham University Business School Mill Hill Lane, DH1 3LB United Kingdom Website: https://mjwalker19.github.io/ Email: matthew.j.walker@durham.ac.uk

### Education

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

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

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.

#### References

Prof. Jason Shachat\* Durham University jason.shachat@durham.ac.uk +44 (0)191 33 45895

Dr. Kenju Kamei Durham University kenju.kamei@durham.ac.uk +44 (0)191 33 47230 Prof. Daniel John Zizzo The University of Queensland d.zizzo@uq.edu.au +61 7 336 56242 Dr. Kyle Hyndman The University of Texas at Dallas kyleb.hyndman@utdallas.edu +1 (972) 883-5872

### Research Interests

Experimental and Behavioural Economics, Public Procurement, Industrial Organization, Public Economics.

## **Teaching Interests**

Experimental Economics, Microeconomic Theory, Applied Econometrics.

## Research Papers

1. Walker, M. J. (2020). Trade Contingencies in Procurement Interactions. [Job Market Paper]. *Target: Management Science.* 

**Abstract:** It is difficult to write a perfect contract. Contracts are often renegotiable and parties to a contract may understand their obligations differently. When these differences are important, disputes over buyer and seller non-performance arise. This paper addresses the problem of seller non-performance in procurement, by developing a flexible price contract structure that contains an

arbitration clause. We embed this structure into a procurement interaction, where the contract price bounds are determined under competitive conditions. We test the predictions of the model in a laboratory experiment. Our theoretical results suggest that there exists a contingent contract, defined by the degree of price flexibility and the probability of arbitration, for which trade is efficient. This contract is robust in that it relies only on the regard of each party to their own interest. We find support for the model in our experimental data. Yet the shadow of an arbitrator crowds out buyer reciprocity, and so a contingent contract does not increase trade efficiency relative to a flexible-price contract that contains non-binding incentives. Our findings have several managerial implications for the establishment of trust and procurement efficiencies driven by competition.

2. Walker, M. J., Katok, E. & Shachat, J. (2020). Trust and Trustworthiness in Procurement Contracts with Retainage. <u>ESI Working Paper 20-34</u>. *Under review: Management Science*.

Abstract: When product quality is unverifiable by third parties, enforceable contracts that condition price upon quality are not feasible. If higher quality is also costly to deliver, moral hazard by sellers flourishes, particularly when procurement is via a competitive auction process. Retainage is a contractual mechanism that presents a solution to the third-party unverifiability problem, by setting aside a portion of the purchase price. After delivery, the buyer has sole discretion over the amount of retainage money that is released to the seller. While generally a feasible contract form to implement, retainage introduces a moral hazard for the buyer. We use laboratory experiments to investigate how and when retainage might be successfully used to facilitate trust and trustworthiness in procurement contracts. We observe that retainage induces a significant improvement in product quality when there are some trustworthy buyers in the population, consistent with a model of fair payment norms that we develop. This improvement is realized at the cost of increased buyer-seller profit inequalities. We also observe that at high levels of retainage, there is a welfare-decreasing market unraveling in which sellers do not bid on contracts. Our results imply that retainage incentives can mitigate the tension between competition and cooperation arising from reverse auctions, but only at appropriate levels of retainage.

3. Hyndman, K. B. and Walker, M. J. (2020) Fairness and Risk in Ultimatum Bargaining. Available at: https://ssrn.com/abstract=3651557.

Under review: Games and Economic Behavior.

**Abstract:** We conduct an experiment in which subjects play an ultimatum game but, rather than bargaining over money, they bargain over lottery tickets for a prize. Compared to the standard ultimatum game, proposers offer a significantly lower percentage of lottery tickets, which is inconsistent with either ex ante or ex post fairness. In contrast, responders have a significantly higher acceptance threshold, which is consistent with ex post fairness. By varying the timing of the accept/reject decision of responders, we also show that intentions matter and present evidence of a choice anomaly in responder preferences concerning their willingness to accept extreme inequality.

4. Shachat, J., Walker, M. J. & Wei, L. (2020). The impact of the Covid-19 pandemic on economic behaviours and preferences: Experimental evidence from Wuhan. <a href="ESI Working Paper 20-33">ESI Working Paper 20-33</a>. Under review: Journal of Public Economics. Selected for session at AEA Annual Meeting 2021.

**Abstract:** We examine how the emergence of Covid-19 in Wuhan, and the ramifications of associated events, influence pro-sociality, trust and attitudes towards risk and ambiguity. We assess these influences using an experiment consisting of financially incentivized economic tasks. We establish causality via the comparison of a baseline sample collected pre-epidemic with five sampling waves starting from the imposition of a stringent lockdown in Wuhan and completed six weeks later. We find significant long-term increases - measured as the difference between the baseline and final wave average responses - in altruism, cooperation, trust and risk tolerance. Participants who remained in Wuhan during the lockdown exhibit lower trust and cooperation relative to other participants. We

identify transitory effects from two events that permeated the public psyche. First, in the immediate aftermath of the Wuhan lockdown, there is a decrease in trust and an increase in ambiguity aversion. Second, the news of a high-profile whistleblower's death also decreases trust while heightening risk aversion.

5. 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.

Revise and Resubmit at Journal of the Economic Science Association.

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.

## Works in Progress

- 1. Eliciting individual risk preferences in first-price auctions (with Ernan Haruvy and Timo Heinrich). *Under review: Games and Economic Behavior.*
- 2. Late payments in Bertrand competition (with Kyle Hyndman). *Target: RAND Journal of Economics*.
- 3. Moralizing the public good (with Simon Siegenthaler). *Target: Journal of Public Economics*.
- 4. Third-party punishment norms in large-scale communities (with Kenju Kamei). *Target: Journal of Economic Behavior & Organization*.

### 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 ESA Global Conference, SABE Annual Conference, Utah Experimental Economics Conference.

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

## Workshop Participation

2020 Bargaining: Experiments, Empirics, and Theory.

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

2018 ZEW Workshop on Market Design.

2017 Experimetrics: Econometrics for Experimental Data.

### **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).

European Economic Association (2020–Present).

## Teaching and Research Assistant

### Durham University

Teaching Assistant, Dissertation in Economics (Undergraduate Year 3): 2019 – 2020, lectures on panel data methods and econometrics help sessions.

Teaching Assistant, Economic Methods (Undergraduate Year 1): Autumn 2019, seminars on mathematical methods for economic theory.

Research Assistant, Kenju Kamei, December 2017 – March 2018, zTree development for economic experiments.

## 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, LATEX, Camtasia.

Research accreditations: ONS Accredited researcher.

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