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Price discovery with fallible choice

Aad Ruiters

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General equilibrium theory can state conditions for the existence, uniqueness and optimality of the Walrasian equilibrium. However, it cannot satisfactorily explain how this equilibrium comes about.

Experimental economists, on the other hand, claim that it takes a few uninformed traders and a Continuous Double Auction to achieve results that closely resemble the Walrasian equilibrium. This suggests that we can learn something profound about price discovery from experimental trading.

This thesis seeks behavioral explanations of price formation, which acknowledge that human choice is fallible. It analyzes experimental data by means of simulation techniques.



Price discovery with fallible choice

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aan de Universiteit van Amsterdam
op gezag van de Rector Magnificus
prof. dr. ir. K.I.J. Maex

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Faculteit: Economie en Bedrijfskunde

*To Annemieke, to my mother
and to the memory of my father*

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Preface

My life has been a string of second chances and this thesis is just another example. I want to thank the University of Amsterdam and Cars Hommes in particular, for giving me the opportunity to pursue this long held dream.

Cars proposed that Jan Tuinstra be my first supervisor, while he himself assumed the role of second supervisor. Together they have been a good team: Cars was mainly focused on the process, while Jan has given me valuable suggestions on content. He introduced me to the experiments of Anderson et al., gave constructive criticisms when I needed it, and excellent recommendations with respect to composition. While I could proceed as I saw fit and was given ample time for getting things right, with hindsight I realize that his "invisible hand" has guided me throughout.

In 1984, I was very lucky to have landed a job at the Postgiro, one of the predecessors of ING. Although a distinct pleasure, working at ING has seriously interfered with the completion of my masters, and later also with writing a thesis. Returning to class in 1986 (while continuing to work) fortunately was also a real joy; especially due to the lectures of Roald Ramer and of Neil de Marchi. After getting my masters degree, my first attempt at writing a thesis failed because I could not (or would not) spend enough time on it. I do have fond memories though, of working with Annemarie ter Veer, and of taking Frank Hahn's lectures at the Rotterdam workshop of the Network Quantitative Economics.

Discussing science and philosophy with Peter van den Besselaar over Thai food has been instrumental in keeping the dream alive. Twenty five years later, when I tried again, ING was as demanding as ever. The best course of action, it seemed to me, was to give notice and devote myself completely to writing this thesis. I like to thank my wife, Annemieke, for backing this decision and for bearing with me. No one has waited longer for this thesis to be finished than she did.

I also would like to thank my mother. She and my father have always encouraged me and believed in me. Letting me have a college education was one of their many gifts.

Amstelveen, August 2017