Learning to forecast: Genetic algorithms and experiments

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The central question that this thesis addresses is how economic agents learn to form price expectations, which are a crucial element of macroeconomic and financial models. The thesis applies a Genetic Algorithms model of learning to previous laboratory experiments, explaining the observed heterogeneity of individual forecasting behavior. It also studies the effect of information networks in this model, showing that information sharing may lead to more volatile price dynamics. Finally, the thesis reports on an experiment in which subjects either trade an asset or predict its price. The former turns out to be more difficult for the subjects than the forecasting task, which leads to repeated price bubbles.

Tomasz A. Makarewicz (1984) holds a MA degree in economics and philosophy from Warsaw University and a MSc degree in economics from the Tinbergen Institute. In 2011 he joined the Center for Nonlinear Dynamics in Economics and Finance to write his PhD thesis. His main interests are individual learning and heterogeneous price expectations in experiments and agent-based models.
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Learning to Forecast: 
Genetic Algorithms 
and Experiments

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Contents

Acknowledgments i

1 Introduction 1
   1.1 Learning, rationality and markets 1
   1.2 Evidence from markets and experiments 4
   1.3 Models of learning 9
      1.3.1 Rational learning 9
      1.3.2 Learning and experiments: EWA and HSM 10
      1.3.3 Agent-based models of learning 12
   1.4 Thesis outline 14

2 Learning-to-Forecast with Genetic Algorithms 17
   2.1 Introduction 17
   2.2 Learning to Forecast and Heuristic Switching 21
   2.3 The Genetic Algorithms model 24
      2.3.1 Genetic Algorithms 24
      2.3.2 Model specification 25
      2.3.3 50-period ahead simulations 28
      2.3.4 One-period ahead predictions 33
   2.4 Evidence from other experiments 34
      2.4.1 Large shocks to the fundamental price 35
      2.4.2 Cobweb economy 39
      2.4.3 Two-period ahead asset pricing 42
   2.5 Conclusions 48

Appendix 2.A Formal definition of Genetic Algorithms 52
   2.A.1 Optimization procedures: traditional and Genetic Algorithms 52
   2.A.2 Binary strings 52
   2.A.3 Evolutionary operators 53
### Appendix 2.B Initialization of the model

Appendix 2.C Parametrization of the forecasting heuristic

2.C.1 Is the anchor important for HHST09?

2.C.2 Anchor and HSTV05

2.C.3 Degree of trend extrapolation

Appendix 2.D Definition of forecasting rules

Appendix 2.E APF for the GA model

2.E.1 General specification

2.E.2 Results for the four experiments

Appendix 2.F Price autocorrelation in the cobweb experiment

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#### 3 Networks of heterogeneous expectations in an asset pricing market

3.1 Introduction

3.2 Theoretical model

3.2.1 Market

3.2.2 Network

3.2.3 Fundamental solution benchmark

3.2.4 Experimental and Genetic Algorithms benchmark

3.2.5 Price expectations and learning

3.2.6 Coordination versus herding

3.3 Monte Carlo studies

3.3.1 Parametrization of the model

3.3.2 Initialization

3.3.3 Small networks of six agents

3.3.4 Large networks

3.4 Networks of six agents

3.4.1 Benchmark model without network

3.4.2 Contrarian strategies induced by networks

3.4.3 Learning in asymmetric networks

3.4.4 Profits and utility

3.5 Large networks

3.5.1 Impact of the network on price stability

3.5.2 Impact of the network on individual behavior

3.6 Conclusions

Appendix 3.A Rational solution

Appendix 3.B Proof of Lemma 1

Appendix 3.C Equivalence of forecasting and trading peer bias.