



UvA-DARE (Digital Academic Repository)

Experiments on heterogeneous expectations and switching behavior

Bao, T.

[Link to publication](#)

Citation for published version (APA):

Bao, T. (2012). Experiments on heterogeneous expectations and switching behavior

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <http://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Bibliography

- [1] Adam, K., 2007, "Experimental Evidence on the Persistence of Output and Inflation", *Economic Journal*, 117, 603-635.
- [2] Anderson, L., and C. A. Holt, 1997, "Information Cascades in the Laboratory", *American Economic Review*, 87 (5), 847-862.
- [3] Anufriev, M., T. Bao, and J. Tuinstra, 2012, "Switching Behavior in the Lab: Estimation of the Intensity of Choice", *Mimeo*, University of Amsterdam.
- [4] Anufriev, M., T. Bao, J. Tuinstra and A. Sutan, 2012, "A Simple Experiment on Fee Structure and Mutual Fund Choice", *Mimeo*, University of Amsterdam.
- [5] Anufriev, M., and C.H. Hommes, 2012a "Evolution of Market Heuristics" *Knowledge Engineering Review*, forthcoming.
- [6] Anufriev, M., and C.H. Hommes, 2012b. "Evolutionary Selection of Individual Expectations and Aggregate Outcomes in Asset Pricing Experiments" *American Economic Journal: Microeconomics*, forthcoming.
- [7] Anufriev, M., C.H. Hommes and R. Philipse, 2012, "Evolutionary Selection of Expectations in Positive and Negative Feedback Markets" *Journal of Evolutionary Economics*, forthcoming.

- [8] Alevy, J.E., M.S. Haigh and J. A. List, 2007, "Information Cascades: Evidence from a Field Experiment with Financial Market Professionals", *Journal of Finance*, 62(1), 151-180.
- [9] Arifovic, J., 1996, "The Behaviour of the Exchange Rate in the Genetic Algorithm and Experimental Economies," *Journal of Political Economy* 104, 510-541.
- [10] Bao, T., C.H. Hommes, J.H. Sonnemans and J. Tuinstra, 2012, Individual Expectations, Limited Rationality and Aggregate Outcomes, *Journal of Economic Dynamics and Control*, 36(8), 1101-1120.
- [11] Bao, T., J. Duffy and C.H. Hommes, 2011, "Learning, Forecasting and Optimizing: an Experimental Study", *CeNDEF Working paper* 11-08, University of Amsterdam.
- [12] Barber, B.M., T. Odean and L. Zheng, 2005, "Out of Sight, Out of Mind: The Effect of Expenses on Mutual Funds" *Journal of Business*, 78, 2095–2119.
- [13] Barberis, N., Shleifer, A., and R. Vishny, 1998, "A Model of Investor Sentiment", *Journal of Financial Economics* 49, 307-343.
- [14] Becker, G., 1962, "Irrational Behavior and Economic Theory", *Journal of Political Economy*, 70(1), 1-13.
- [15] Bereby-Meyer, Y. and I. Erev, 1998, "On Learning To Become a Successful Loser: A Comparison of Alternative Abstractions of Learning Processes in the Loss Domain", *Journal of Mathematical Psychology* 42, 266-286.
- [16] Blinder, A.S., and J. Morgan, 2005, "Are Two Heads Better Than One? Monetary Policy by Committee," *Journal of Money, Credit and Banking*, 37, 789-811.
- [17] Bloomfield, R. and J. Hales, 2002, "Predicting the Next Step of a Random Walk: Experimental Evidence of Regime-shifting Beliefs" *Journal of Financial Economics* , 65, 397–414.

- [18] Bornstein, G., and I. Yaniv, 1998, "Individual and Group Behaviour in the Ultimatum Game: Are Groups more 'Rational' Players?," *Experimental Economics*, 1, 101-108.
- [19] Bossaerts, P., C. Plott, and W. Zame, 2007, "Prices and Portfolio Choices in Financial Markets: Theory, Econometrics, Experiments", *Econometrica*, 75(4), 993-1038.
- [20] Boswijk, H.P., C.H. Hommes and S. Manzan, 2007, "Behavioral Heterogeneity in Dtock Prices", *Journal of Economic Dynamics and Control*, 31(6), 1938-1970.
- [21] Branch, W.A., 2004, "The Theory of Rationally Heterogeneous Expectations: Evidence from Survey Data on Inflation Expectations", *Economic Journal*, 114, 592-621.
- [22] Branch, W.A., and G. Evans, 2006, "Intrinsic Heterogeneity in Expectation Formation", *Journal of Economic Theory*, 127, 264-295.
- [23] Branch, W.A., and G. Evans, 2007, "Model Uncertainty and Endogenous Volatility", *Review of Economic Dynamics*, 10, 207-237.
- [24] Brock, W.A. and C.H. Hommes, 1997, "A Rational Route to Randomness", *Econometrica*, 65, 1059-95.
- [25] Brock, W.A., and Hommes, C.H., 1998, "Heterogeneous Beliefs and Routes to Chaos in a Simple Asset Pricing Model", *Journal of Economics Dynamics and Control*, 22, 1235-1274.
- [26] Camerer, C.F. and Ho, T.-H., 1998, "EWA Learning in Normal-form Games: Probability Rules, Heterogeneity and Time Variation", *Journal of Mathematical Psychology*, 42, 305-26.
- [27] Camerer, C., and T. H. Ho, 1999, "Experience-weighted Attraction Learning in Normal Form Games", *Econometrica*, 67(4), 827 - 874.
- [28] Cason, T., and V. Mui, 1997, "A Laboratory Study of Group Polarization in the Team Dictator Game," *Economic Journal* 107, 1465-1483.

- [29] Chen, Y. and R. Gazzale, 2004, "When Does Learning in Games Generate Convergence to Nash Equilibria? The Role of Supermodularity in an Experimental Setting", *American Economic Review*, 94, 1505-1535.
- [30] Choi, J.J., D. Laibson and B.C. Madrian, 2010, "Why does the Law of One Price Fail? An Experiment on Index Mutual Funds" *Review of Financial Studies* 23, 1405–1432.
- [31] Choi, J.J., D. Laibson, B.C. Madrian and A. Metrick, 2009, "Reinforcement Learning and Savings Behavior" *The Journal of Finance* 64, 2515–2534.
- [32] Cornea, A., Hommes, C.H., and D. Massaro, 2012, "Behavioral Heterogeneity in U.S. Inflation Dynamics", CeNDEF Working paper 12-03 University of Amsterdam.
- [33] Cox, J.C., 2002, "Trust, Reciprocity, and Other-Regarding Preferences: Groups vs. Individuals and Males vs. Females," in (R. Zwick, and A. Rapoport, eds.), *Advances in Experimental Business Research*, pp. 331-50, Dordrecht: Kluwer Academic Publishers.
- [34] Crockett, S., and J. Duffy, 2010, "A Dynamic General Equilibrium Approach to Asset Pricing Experiments," *Working Paper*, University of Pittsburgh.
- [35] De Bondt, W.F.M. and R.H. Thaler, 1985 "Does the Stock market Overreact?" *Journal of Finance*, 40 (3), 793-805.
- [36] Drehmann, M., J. Oechssler and A. Roeder, 2005, "Herding and Contrarian Behavior in Financial Markets: An Internet Experiment", *American Economic Review*, 95(5), 1403-1426.
- [37] Duffy, J., 2008a, "Experimental Macroeconomics", Entry in: S. Durlauf and L. Blume, (Eds.), *The New Palgrave Dictionary of Economics*, 2nd ed., New York: Palgrave Macmillan.
- [38] Duffy, J., 2008b, "Macroeconomics: A Survey of Laboratory Research", *Working Paper*, University of Pittsburgh.

- [39] Dwyer, G.P., A.W. Williams, R.C. Battalio and T.I. Mason (1993): Tests of Rational Expectations in a Stark Setting. *The Economic Journal* 103, 586–601.
- [40] Ezekiel, M., 1938, “The Cobweb Theorem,” *Quarterly Journal of Economics* 52, 255-280.
- [41] Erev, I.; Bereby-Meyer, Y. and A.E. Roth, 1999 “The Effect of Adding a Constant to All Payoffs: Experimental Investigation, and Implications for Reinforcement Learning Models." *Journal of Economic Behavior and Organization*, 39(1), 111-28.
- [42] Erev, I. and Roth, A.E., 1998, “Prediction How People Play Games: Reinforcement Learning in Games with Unique Strategy Equilibrium", *American Economic Review* 88, 848-881.
- [43] Fehr, E., and J.R. Tyran, 2002, “Does Money Illusion Matter?" *American Economic Review*, 91, 1239-1262.
- [44] Fehr, E., and J.R. Tyran, 2005, “Individual Irrationality and Aggregate Outcomes," *Journal of Economic Perspectives*, 19, 43-66.
- [45] Fehr, E., and J.R. Tyran, 2008, “Limited Rationality and Strategic Interaction: the Impact of the Strategic Environment on Nominal Inertia", *Econometrica*, 76(2), 353-394.
- [46] Franke, R., and F. Westerhoff, 2011, “Estimation of a Structural Stochastic Volatility Model of Asset Pricing", *Computational Economics* 38(1), 53-83.
- [47] Friedman, D., K. Pommerenke, R. Lukose, G. Milam, and B.A. Huberman, 2007, Searching for the sunk cost fallacy, *Experimental Economics*, 10, 79-104.
- [48] Fourgeaud, C., C. Gourieroux and J. Pradel, Learning Procedures and Convergence to Rationality, *Econometrica*, 54(4), 845-868.

- [49] Gil-Bazo, J., and P. Ruiz-Verdu, 2009, The relation between price and performance in the mutual fund industry, *Journal of Finance*, 64(5), 2153-2183.
- [50] Gode, D.K., and S. Sunder, 1993, "Allocative Efficiency of Markets with Zero-Intelligence Traders: Market as a Partial Substitute for Individual Rationality", *Journal of Political Economy*, 101(1), 119-137.
- [51] Goldbaum, D.H., and B. Mizrach, 2008, "Estimating the Intensity of Choice in a Dynamic Mutual Fund Allocation Decision", *Journal of Economic Dynamics and Control*, 32(12), 3866-3876.
- [52] Haltiwanger, J. and Waldman, M. 1985, "Rational Expectations and the Limits of Rationality: an Analysis of Heterogeneity" *American Economic Review*, 75 (3), 326-340.
- [53] Heemeijer, P. , Hommes, C.H., Sonnemans, J., and J. Tuinstra, 2009 "Price Stability and Volatility in Markets with Positive and Negative Expectations Feedback: An Experimental Investigation", *Journal of Economics Dynamics and Control*, 33, 1052-1072.
- [54] Hommes, C.H., J.H. Sonnemans, J. Tuinstra and H. van de Velden, 2005, "Coordination of Expectations in Asset Pricing Experiments". *Review of Financial Studies*, 18 (3), 955-980.
- [55] Hommes, C.H., J.H. Sonnemans, J. Tuinstra and H. van de Velden, 2007, "Learning in Cobweb Experiments." *Macroeconomic Dynamics* 11, 8-33.
- [56] Hommes, C.H., Sonnemans, J.H., Tuinstra, J.,and van de Velden, H., 2008, "Expectations and Bubbles in Asset Pricing Experiments". *Journal of Economic Behavior and Organization* 67, 116-133.
- [57] Hommes, C.H., 2011, "The Heterogeneous Expectations Hypothesis: Some Evidence from the Lab", *Journal of Economic Dynamics and Control*, 35(1), 1-24.

- [58] Investment Company Institute, 2012, *2012 Investment Company Fact Book*, http://www.ici.org/pdf/2012_factbook.pdf.
- [59] Huber, J., and M. Kirchler, 2012, "The Impact of Instructions and Procedure on Reducing Confusion and Bubbles in Experimental Asset Markets", *Experimental Economics*, 15: 89-105.
- [60] Huck, S., H.T. Normann, and J. Oechssler, 1999, "Learning in Cournot Oligopoly—An Experiment," *Economic Journal* 109, C80-C95.
- [61] Kirchler, M., 2009, "Underreaction to Fundamental Information and Asymmetry in Mispricing between Bullish and Bearish Markets. An Experimental Study", *Journal of Economic Dynamics and Control*, 33, 491-506.
- [62] Kirchler, M., J. Huber and T. Stockl, 2012, "Thar She Bursts: Reducing Confusion Reduces Bubbles", *American Economic Review*, 102(2): 865-883.
- [63] Kocher, M., and M. Sutter, 2005, "When the 'Decision-maker' Matters: Individual versus Team Behaviour in Experimental 'Beauty Contest' Games," *Economic Journal* 115, 200-223.
- [64] Kouwenberg, R., and R.C.J. Zwinkels, 2010, "Chasing Trends in the U.S. Housing Market", *Erasmus University Rotterdam working paper*.
- [65] Lei, V., C.N. Noussair and C.R. Plott, 2001, "Nonspeculative Bubbles in Experimental Asset Markets: Lack of Common Knowledge of Rationality vs. Actual Irrationality," *Econometrica* 69, 831-859.
- [66] Lim, S.S., E.C. Prescott and S. Sunder, 1994, "Stationary Solution to the Overlapping Generations Model of Fiat Money: Experimental Evidence," *Empirical Economics* 19, 255-77.

- [67] Lucas, R.E., 1972, "Expectations and the Neutrality of Money", *Journal of Economic Theory*, 4(2), 103-124.
- [68] Marcet, A., and J.P. Nicolini, 2004, "Recurrent Hyperinflations and Learning", *American Economic Review*, 93(5), 1476-1498.
- [69] Marimon, R. and S. Sunder, 1993, "Indeterminacy of Equilibria in a Hyperinflationary World: Experimental Evidence", *Econometrica*, 61(5), 1073-1107.
- [70] Marimon, R. and S. Sunder, 1994, "Expectations and Learning under Alternative Monetary Regimes: An Experimental Approach", *Economic Theory*, 4, 131-62.
- [71] Marimon, R., Spear S. E. and S. Sunder, 1993, "Expectationally Driven Market Volatility: An Experimental Study", *Journal of Economic Theory*, 61(1), 74-103.
- [72] Muth, J.F., 1961, "Rational Expectations and the Theory of Price Movements", *Econometrica*, 29(3), 315-335.
- [73] Noussair, C. N., and O. Powell, 2010, "Peaks and Valleys: Price Discovery in Experimental Asset markets with Non-Monotonic Fundamental", *Journal of Economic Studies*, 37(2), 152-180.
- [74] Offerman, T., J. Potters and J.H. Sonnemans, 2002, "Imitation and Belief Learning in an Oligopoly Experiment," *Review of Economic Studies* 69, 973-97.
- [75] Patel, J., Zeckhauser, R., and D. Hendrick, "Investment Flows and Performance: Evidence from Mutual Funds, Cross-Boarder Investments and New Issues", in *Japan, Europe and International Financial Markets: Analytical and Empirical Perspectives*, edited by Sato, R., Levich, R., and R. Ramachandran, Cambridge University Press, 1994.
- [76] Pfajfar, D. and B. Zakelj, 2009, "Experimental Evidence on Inflation Expectation Formation", *CentER Discussion Paper*.

- [77] Potters, J. and S. Suetens, 2009, "Cooperation in experimental games of strategic complements and substitutes", *Review of Economic Studies*, 76(3), 1125-1147.
- [78] Rubinstein, A., 2007, "Instinctive and Cognitive Reasoning: A Study of Response Times," *Economic Journal* 117, 1243-1259.
- [79] Sargent, T.J., 1993. *Bounded Rationality in Macroeconomics: The Arne Ryde Memorial Lectures*, OUP Catalogue, Oxford University Press.
- [80] Sargent, T.J., 2008, "Evolution and Intelligent Design," *American Economic Review* 98, 5-37.
- [81] Sirri, E., and P. Tufano, 1998, "Costly Search and Mutual Fund Flows", *Journal of Finance*, 53(5), 1589-1622.
- [82] Smith, V. L., Suchanek, G. L. and A. W. Williams, 1988, "Bubbles, Crashes, and Endogenous Expectations in Experimental Spot Asset Markets", *Econometrica*, 56(5), 1119-1151.
- [83] Sonnemans, J., and J. Tuinstra, 2010, "Positive Expectations Feedback Experiments and Number Guessing Games as Models of Financial Markets", *Journal of Economic Psychology*, 31(6), 964-984.
- [84] Soros, G., 2009, "Crisis is Endemic to the Financial System", *New Perspectives Quarterly*, 26 (1), 7-9.
- [85] Tversky, A., and D. Kahneman, 1974, "Judgement under Uncertainty: Heuristics and Biases," *Science*, 185, 1124-1130.
- [86] Vega-Redondo, F., 1997, "The Evolution of Walrasian Behaviour", *Econometrica*, 65, 375-384.