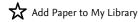
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Complex Methods in Economics: An Example of Behavioral Heterogeneity in House Prices

De Nederlandsche Bank Working Paper No. 329

32 Pages

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De Nederlandsche Bank (Dutch Central Bank); VU University Amsterdam

Maria Demertzis (https://papers.ssrn.com/sol3/cf\_dev/AbsByAuth.cfm?per\_id=3008629)

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University of Amsterdam - Faculty of Economics and Business (FEB); Tinbergen Institute

Marco van der Leij (https://papers.ssrn.com/sol3/cf\_dev/AbsByAuth.cfm?per\_id=113144)

CeNDEF, University of Amsterdam; Congregation of the Blessed Sacrament - European Novitiate

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## Abstract

We show how simple statistical techniques for capturing critical transitions used in natural sciences, fail to capture economic regime shifts. This implies that we need to use model-based approaches to identify critical transitions. We apply a heterogenous agents model in a standard housing market model to show that these family of models generate non-linear responses that can capture such transitions. We estimate this model for the United States and the Netherlands and find that first, the data does capture the heterogeneity in expectations and, second, that the qualitative predictions of such nonlinear models are very different to standard linear benchmarks. It would be important to identify which approach can serve best as an early warning indicator.

Keywords: critical transitions, heterogenous agents model, bounded rationality, housing prices

JEL Classification: C53, R21, R31

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