Accepted Manuscript

Title: An evolutionary Cournot model with limited market

knowledge

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PII: S0167-2681(15)00134-1

DOI: http://dx.doi.org/doi:10.1016/j.jebo.2015.04.024

Reference: JEBO 3580

To appear in: Journal of Economic Behavior & Organization

Received date: 21-7-2014 Revised date: 24-3-2015 Accepted date: 29-4-2015

Please cite this article as: Gian Italo Bischi, Fabio Lamantia, Davide Radi, An evolutionary Cournot model with limited market knowledge, *Journal of Economic Behavior and Organization* (2015), http://dx.doi.org/10.1016/j.jebo.2015.04.024

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Highlights

- We propose and analyze an evolutionary game of Cournot competition with two groups of firms that can choose between two different boundedly rational behavioral rules sharing the same Nash equilibria.
- The evolutionary pressure that regulates the dynamics of the fraction of firms using a given behavioral rule is based on a profit-driven (exponential) replicator dynamics.
- Memory effects on past profits and random noise in the demand function are considered for comparison.
- Analytical conditions for the evolutionary dominance of the less computational-demanding behavioral rule are provided and economic intuition is given.
- We study of out-of-equilibrium dynamics, with long-run coexistence of both strategies, including some complex (oscillatory) time patterns.

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