




Endogenous Demand and Demanding Consumers: A Computational Approach

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Abstract In this paper we introduce an agent-based model of a discretionary consumption sector in which demand is transformed by social emulation among consumers, thereby making producers adapt to demand. Our theoretical approach considers bounded rationality of agents (consumers and producers), heterogeneity of both agents and product characteristics, and the co-evolution of consumer desires, mainly, by social emulation. The proposed dynamics can reproduce some stylized facts that are well known in literature, such as the S-shaped adoption rate curve that many industries develop over their life cycle. Our model also obtains a novel result with relevant theoretical implications: the strictness of requirements, a factor rarely studied in consumer theory, has an important effect on some aggregate variables that are usually explained by the supply side, such as the number of producers or the industrial concentration index. In particular, the minimum number of producers (and then, the maximum Herfindahl index) is obtained for an intermediate degree of consumer requirements, a fact that is empirically validated for the wine market in Spain.

Keywords Agent-based model · Emulation · Demand-driven market · Consumer desires · Producer decisions · Supply and demand · Evolutionary market

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