Calculations on Randomness Effects on the Business Cycle of Corporations through Markov Chains

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The purpose of this project was to create a credible stochastic model of the micro economic scenario of two companies in competition. This model was then used to predict the companies' future and to show how consumer rationality effect market competition. With the aid of Matlab, this model was used to simulate different market scenarios. In order to make predictions of the future evolution of the two companies, this model was made adaptable to different levels of customer rationality and company margins. Moreover, the simulations showed a tendency in the market; when customers become more rational and educated monopolies increase in frequency. These results indicate a link between customer rationality and the forming of market based monopolies.

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