SIMPLE MODEL OF OPINION FORMATION

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1. INTRODUCTION

One of the main topics in the economic theory is how individuals make choices between various alternatives. This problem is, for example, concerned explicitly in the classic consumer model of utility optimization but it is also implicitly assumed in models like Bertrand's duopoly where the choice procedure is simply to choose the cheaper good.

This short note concerns the process of opinion formation in a large population. It is assumed that there are two alternatives (say presidential candidates) and at each time every person in the population prefers one of the alternatives. As time goes by people may change their opinions and switch to a different alternative. Each person uses a very simple procedure consisting of two steps. In the first step a small reference group is chosen at random. In the second step an opinion that is shared by the majority in the reference group is followed with the exogenous probability α. As this procedure is repeated in subsequent periods the shares of the population preferring given alternative evolve.

There are two main points investigated herein. The first concerns existence and (local) stability of the equilibria and the second dependence of the equilibria on the follow-up probability α. It is showed that depending on the follow-up probability there are two distinct types of behavior of the model, i.e. the model is not structurally stable. Also, it is showed that the bifurcation occurs for relatively high values of the follow-up probability. These results are confronted with the results of the US presidential elections since 1872 through 2008.

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