Global Stability of General Equilibrium: The Dynamics of a Symmetric Difference Equation

Ken-ichi Ishiyama[*]

June 25, 2007

Abstract

When discussing about the actual effectiveness of the so called Invisible Hand with respect to the stability problem of general equilibrium, the simple model of Scarf (1960) is often cited as an example for which the motion of prices is globally unstable. The purposes of this paper are as follows: one is to capture the solution of Scarf's original model through discretization of all variables in the model so as to understand the market clearing process in detail, and the other is to modify behavior of individuals in the model in a manner widely acceptable. As a result it is shown that price path converges to the equilibrium price vector under a condition concerning behavior of individuals even if the initial allocation is not Pareto-efficient.

[*] *E-mail*: ishiyama@ms.u-tokyo.ac.jp