Bounded response and the equivalence of nonmanipulability and independence of irrelevant alternatives

Shin Sato[*]

Faculty of Economics, Fukuoka University

8-19-1 Nanakuma, Jonan-ku, Fukuoka, JAPAN 814-0180

E-mail: `shinsato@adm.fukuoka-u.ac.jp`

Abstract

A social welfare function satisfies *bounded response* if the smallest change in the variable (i.e., preference profile) leads to the smallest change, if any, in the value (i.e., social preference). We show that each social welfare function on each *connected* domain satisfies *bounded response* and *nonmanipulability* if and only if it satisfies *monotonicity* and *independence of irrelevant alternatives (IIA)*. Thus, with additional properties, the equivalence of two major properties, *nonmanipulability* and *IIA*, is established.

Keywords: independence of irrelevant alternatives, nonmanipulability, bounded response, social welfare function

JEL classification: D71.