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Preference Aggregation under Binary Uncertainty

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Abstract

Non-dictatorial Paretian aggregation of subjective expected utility preferences is possible under binary uncertainty when differences in tastes are small compared to differences in beliefs. *Keywords: preference aggregation, uncertainty, subjective expected utility. JEL classification numbers: D63, D71.*

1 Introduction

Aggregating a collection of subjective expected utility (SEU) preferences into a single SEU preference is generally difficult. A central result established by Mongin (1995) states that if the Pareto (weak preference) principle is imposed, the social preference must coincide with that of one of the individuals –unless beliefs or utilities are affinely dependent. In particular, two-individual non-dictatorial Paretian aggregation is only possible when tastes or beliefs coincide.

General possibility results must thus weaken the Pareto principle or the SEU restriction on society's preference. Illustrations of the former approach include Gilboa, Samet and Schmeidler (2004) and Gilboa, Samuelson and Schmeidler (2014); examples of the latter are Mongin (1998), Chambers and Hayashi (2006), Keeney and Nau (2011), and Sprumont (2018). See the survey by Mongin and Pivato (2016) for further references.

The current note follows a third route. Mongin's result holds in the Savage framework –it requires a rich set of states of nature.¹ Here, we explore the special case of *binary* uncertainty.

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¹Jackson and Yariv (2015) establish a related impossibility in the context of aggregating time preferences. Their result requires at least *three* time periods.

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