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“Ranking Agendas for Negotiation”

Abstract

Consider a negotiation in which agents will make costly concessions to benefit others—e.g., by implementing tariff reductions, environmental regulations or disarmament policies. An agenda specifies which issue or dimension each agent will make concessions on; after an agenda is chosen, the negotiation comes down to the magnitude of each agent's contribution. We seek a ranking of agendas based on the marginal costs and benefits generated at the status quo. In a transferable utility (TU) setting, there is a simple ranking based on the best available social return per unit of cost (measured in the numeraire). Our main contribution is to axiomatize a measure of social returns on investment in the case without transferable utility. First, we require the ranking not to depend on economically irrelevant changes of units. Second, we require that the ranking be consistent with the TU ranking on problems that are equivalent to TU problems in a suitable sense. The unique ranking satisfying these axioms is represented by the spectral radius (Frobenius root) of a matrix whose entries measure the marginal benefits per unit marginal cost agents can confer on one another.