

Ideology and existence of 50%-majority equilibria in multidimensional spatial voting models *

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Abstract

When aggregating individual preferences through the majority rule in an n -dimensional spatial voting model, the 'worst-case' scenario is a social choice configuration where no political equilibrium exists unless a super majority rate as high as $1 - 1/n$ is adopted. In this paper we assume that a lower d -dimensional ($d < n$) linear map spans the possible candidates' platforms. These d 'ideological' dimensions imply some linkages between the n political issues. We randomize over these linkages and show that there almost surely exists a 50%-majority equilibria, in the above worst-case scenario, when n grows to infinity. Moreover the equilibrium is the *mean voter*. The speed of convergence (toward 50%) of the supermajority rate guaranteeing existence of equilibrium is computed for $d = 1$ and 2.

Keywords: Spatial voting, super majority, ideology, 'mean voter theorem, random point set.