

# Multidimensional Political Competition with Non-Common Beliefs

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## Abstract

This paper extends a standard probabilistic voting model with a multidimensional policy space, allowing candidates to have different beliefs about the distribution of voters' preferences. We focus on the question of whether the common assumption that candidates have the same belief is crucial for the nonexistence of equilibria which is prevalent in many multidimensional models. In the extended model, we show that the set of pairs of the candidates' beliefs for which Nash equilibria exist is almost the same as in the special case with a common belief. However, we also show that the introduction of different beliefs expands the possibility of the existence of "equilibria" at which the candidates may give up infinitesimal amounts of votes (i.e.,  $\epsilon$ -equilibria of Radner (1980) for arbitrarily small  $\epsilon > 0$ ).