On discounting and voting in a simple growth model

In dynamic resource allocation models, the non-existence of voting equilibria is a generic phenomenon due to the multi-dimensionality of the choice space even if agents are heterogeneous only in their discount factors. Nevertheless, at each point in time there may exist a “median voter” whose preferred instantaneous consumption rate is supported by a majority of agents. Based on this observation, we propose an institutional setup (“intertemporal majority voting”) in a Ramsey-type growth model with common consumption and heterogeneous agents, and show that it provides a microfoundation of the choice of the optimal consumption stream of the “median” agent. While the corresponding intertemporal consumption stream is in general not a Condorcet winner among all feasible paths, its induced instantaneous consumption rates receive a majority at each point in time in the proposed intertemporal majority voting procedure. We also provide a characterization of stationary voting equilibria in the case where agents may differ not only in their time preferences, but also in their felicity functions.