Time Inconsistency and Forward-looking Behavior (with Bruno Strulovici)

Abstract

Regardless of its interpretation, the standard exponentially-discounted-utility model implies myopically forward-looking behavior: Preferences at a given period are completely determined by consumption in that period and preferences at the next period. This paper axiomatizes preferences that capture fully forward-looking behavior, delivering a new class of utility representations which includes quasi-hyperbolic ($\beta-\delta$) discounting as a particular case. These representations rationalize phenomena left unexplained not only by the standard model, but also by the $\beta-\delta$ discounting model. Time inconsistency, present bias, and other phenomena are necessary, logical consequences of fully forward-looking behavior and do not require time-varying preferences or psychological considerations absent from the standard model. The approach also delivers tractable, Bellman-type equations characterizing optimal consumption streams, as well as new insights for the welfare analysis of time-inconsistent agents.