Consistency and Stationarity of Individual Time Preferences

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We report the results of an experiment in which subjects make a series of inter-temporal choices. The design of the experiment allows us to (a) use revealed preference analysis at the individual level to test for consistency with utility maximization as well as for stationarity of inter-temporal choices; and (b) to estimate a standard model of quasi-hyperbolic time preferences at the individual level. We document heterogeneity of individual intertemporal choices with respect to patterns of demand behavior and levels of consistency with utility maximization. Our data suggest that lack of consistency with economic rationality may be the driving force of estimated non-stationarities of time preferences. We explore the consequences of parametrically estimating preference parameters even if the assumption of well-defined preferences is questionable (which is a standard approach in the literature). As an aside, choices of subjects can be made visible by simple graphical representations ("footprints"), which often allow to easily identify basic features of subjects' time preferences without any formal analysis.