

Identifying Present-Biased Discount Functions in Dynamic Discrete Choice Models*

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Abstract

We study the identification of dynamic discrete choice models with sophisticated, quasi-hyperbolic time preferences under exclusion restrictions. We consider both standard finite horizon problems and empirically useful infinite horizon ones, which we prove to always have solutions. We reduce identification to finding the present-bias and standard discount factors that solve a system of polynomial equations with coefficients determined by the data and use this to bound the cardinality of the identified set. The discount factors are usually identified, but hard to precisely estimate, because exclusion restrictions do not capture the defining feature of present bias, preference reversals, well.

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