Heterogeneous time preferences and hyperbolic discounting: Evidence from the UK Mortgage Market.

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Abstract

We estimate a dynamic discrete-continuous model of mortgage demand, in which forward-looking borrowers choose the type (i.e. interest rate type, length, etc.) and quantity of mortgages. Borrowers are assumed to have time-separable utility, with quasi-hyperbolic discounting. Time preference plays an important role in understanding inter-temporal economic behaviour. Typically, time preferences are not estimated in dynamic discrete choice models except under special exclusion restrictions (Magnac Thesmar, 2002), we instead provide identification through the addition of the continuous choice over quantity borrowed. An existing literature on quasi-hyperbolic discounting focuses on continuous choices (e.g. savings), to which we are able to add the demand for commitment embedded in the discrete choice over mortgage products. Our reduced-form results confirm the effect of commitment on borrowing decisions, as well as the effect of dynamic inconsistency on demand for commitment. We then use the structural model to quantify the potential welfare implications of modifying the set of products so to improve consumers' commitment.