Identification of Mortgage Demand Function with

Heterogeneous Preferences

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**Abstract**

This paper analyzes the mortgage borrowing process from a Russian state-owned

supplier of residential housing mortgages concentrating on the estimation of demand

function with heterogeneous borrowers’ preferences. Analysis takes into account the

underwriting process and the choice of contract terms of all loans originated from

2008 to 2012. Our dataset contains demographic and financial characteristics for all

applications, loan terms and the performance information for all issued loans by one

regional bank which operates government mortgage programs.

We use a multistep semiparametric approach to estimate the determinants of bank and

borrower choice controlling for possible sample selection and endogeneity of contract

terms. The main contribution to the literature is modeling choice of contract terms

as interdependent by structural system of simultaneous equations with heterogeneous

marginal effects. We found that demand of low-income households who are unable

to afford improving of housing conditions by other instruments than government

mortgage is less elastic according to the change both in interest rate and maturity.

Keywords: mortgage, demand, terms choice, semiparametrics

JEL classification: C14, C30, C51, G21

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