

MODELLING DYNAMICS OF AGGREGATE CONSUMPTION FOR LITHUANIAN ECONOMY

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Household consumption is the largest component of aggregate expenditure in most economies. In Lithuania it accounts for about 65% of spending. Therefore it is important for macroeconomists to be able to explain the determinants of consumer spending via a well-specified consumption function. Although literature on modelling consumption is large [2], in Lithuanian academic literature the analysis of household consumption, at macroeconomic level, is relatively scarce. Typically consumption is an integral part of a larger structural macroeconomic model [4],[5] and there is one recent publication devoted only for the modelling of consumption [3]. In the latter the authors use consumption as the error-correction type of model. Their results are quite close to the general ideas of Friedman's permanent income hypothesis. Modern theories of consumption are based on analysis of optimal consumption behaviour over time under constraint [1]. In equilibrium, a rational consumer chooses optimum levels of consumption in each period so as to maximize utility.

In this paper, we model household consumption from the perspective of the modern representative agent-based approaches. Household chooses a stochastic consumption plan to maximize the expected value of their time-additive nonlinear utility function subject to asset budget constraint. This multi-period problem can be solved by using the Bellman equation. The first order condition is the Euler equation which is typically estimated using the general method of moments. We employ numerical methods to compute equilibrium. Empirical analysis is conducted using quarterly Lithuanian data covering period from year 1995 to 2008.

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