

Logit, CES, and Rational Inattention*

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Abstract

We study fundamental links between two popular approaches to consumer choice: the multinomial logit model of individual discrete choice and the CES utility function, which describes a multiple choice of a representative consumer. We base our analysis on the rational inattention (RI) model and show that the demand system of RI agents, each of which chooses a single option, coincides with the demand system of a fictitious representative agent with CES utility function. Thus, the multiple choice of the representative agent may be explained by the heterogeneity in signals received by the RI agents. We obtain a new interpretation for the elasticity of substitution and the weighting coefficients of the CES utility function. Specifically, we provide a correspondence between parameters of the CES utility function, prior knowledge and marginal cost of information.

Keywords: discrete choice, rational inattention, CES utility function, multinomial logit, representative consumer, demand system

JEL classification codes: D40, D83, L11

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