Consumption Categories and Risk Attitude

Kfir Tshuva

Abstract

We offer a model that adapts the classical consumer choice model by assuming the consumption categories with minimal expenditure thresholds. This seems plausible with reference to real life (e.g., consumption related to car ownership or home ownership). Our model provides a novel explanations for two puzzles: it explains (1) why people often buy both insurance and lottery tickets and (2) why probability range (low or high) affects risk attitude and, in particular, why it does so in opposite directions for gain and loss. The model is consistent with the fourfold pattern of risk attitude used in prospect theory: namely, when an agent is faced with a significant loss or gain, and the probability of loss or gain is low, the agent exhibits risk aversion for loss and risk loving for gain, whereas when the probability of loss or gain is high, the agent exhibits risk loving for loss and risk aversion for gain. Moreover, we show that absolute risk aversion is decreasing in wealth. Using the model, we also show that investing in a lottery ticket (i.e., a lottery with high gain and small loss) can be worthwhile for agents with low wealth whereas, for agents with medium wealth, the added value of the lottery decreases to a negative value as wealth increases. Finally we show that the complexity level of the consumer problem is non-monotonic and relative small for low wealth NP-hard for medium wealth and polynomial for high enough wealth.