Abstract
Standard insurance models often model individuals who face risk over annual wealth, shocks arise unpredictably that lead to variability of consumption within the year. We model insurance demand for an individual who maximizes utility over monthly consumption. The model shows how borrowing costs and liquidity constraints affect the value of lowering cost-sharing. The model can explain puzzlingly high risk aversion: because premiums are paid smoothly, individual’s willingness-to-pay for lowering the deductible can lead to choices that are dominated from a standard costless-borrowing total wealth perspective. Moreover, variation in liquidity constraints leads to much larger variation in the value of insurance than does variation in CRRA coefficients. We do a simple calibration for willingness to reduce a deductible from $1000 to $500 and find evidence of dominated choice with liquidity constraints. Then, using medical claims data disaggregated to the monthly level, we show how liquidity constraints affect the value of the Affordable Care Act’s cost-sharing reductions (CSRs) for Marketplace enrollees. With the monthly consumption model, the insurance value from the CSRs is clearly enough to outweigh modest costs of public funds. We also consider the implications of liquidity constraints for optimal contract design. The standard insurance model has the result that for a given actuarial value, an individual will prefer a deductible contract with no cost-sharing thereafter. However, with the monthly consumption model, an individual can prefer a lower deductible plus coinsurance cost-sharing above the deductible because it smooths risk across months within the year. Finally, we conduct a survey of an approximately representative sample of Americans, and find that proxies for liquidity constraints are associated with higher demand for insurance.