

2005-11-21

PRESS RELEASE

Income uncertainty and Aggregate Consumption

NBB Working Paper nr. 77 – Research Series

www.nbb.be

The analysis of aggregate consumption remains a very active research topic in current macroeconomics. This research paper concentrates on the role of income uncertainty for explaining aggregate consumption. Given that the empirical evidence has failed to provide support for the traditional life cycle/permanent income models of private consumption and saving the theoretical foundations of these models have been relaxed. It is now generally acknowledged that not only the mean but also the variance of future income can affect consumption. In recent years the possible occurrence of “precautionary savings”, i.e. savings against uninsurable income risks, has dominated a large part of the research agenda on household and aggregate consumption. Theoretically, new models like the “buffer stock” model have been developed and tested on both household and aggregate data. While the empirical evidence on the importance of precautionary savings is still mixed, progress has undoubtedly been made in enhancing the understanding of consumer behaviour and in giving better explanations for existing consumption puzzles that were previously deemed unsolvable.

This paper contributes to the literature on precaution by investigating the relevance of aggregate and consumer-specific income risk for aggregate consumption changes and saving in the US over the period 1952-2003. Aggregate income uncertainty is related to uncertainty caused by adverse shocks hitting the economy as a whole. Consumer-specific income uncertainty is related to uncertainty caused by adverse shocks affecting only certain groups of people in the economy. Theoretically, based on a model with prudent optimizing consumers experiencing different income shocks, we obtain a decomposition of the effect of income uncertainty on aggregate consumption into an aggregate and into a consumer-specific part.

Aggregate income uncertainty can be estimated from the volatility found in the aggregate time series for per capita after-tax labour income. Consumer-specific uncertainty however is more difficult to measure. First, the use of uncertainty measures based on panels is limited because of the small time dimension. Second, the use of these measures can be problematic in the presence of measurement errors. Therefore we model consumer-specific uncertainty as an unobserved component that can be identified with the use of determinants of income risk suggested in the literature. Two determinants we consider are the unemployment rate and the transfers received by consumers. Increases in the former are expected to increase income uncertainty while increases in the latter are expected to reduce it.

Our results suggest that aggregate income risk is not an important factor in explaining precautionary savings. Consumer-specific income risk seems to be more important since we find that transfers received by consumers affect their saving behaviour. We find less support for the possibility that the unemployment rate causes precautionary saving behaviour. When extending our model to allow for some consumers that do not optimize but rather base their consumption on their current income (i.e. rule of thumb consumers) our main conclusions are unchanged. Moreover our estimation results then suggest that the fraction of these rule of thumb consumers may be seriously overstated in research based on models that do not explicitly take into account income uncertainty.