CONSUMER BEHAVIOR: NOT THAT SIMPLE

The Naive Consumption Function:

$$C = c_0 + c_1 YD$$

where YD is disposable income. Alternatively, write this as a savings function:

$$S = YD - C = (1 - c_1)YD - c_0$$

so that *savings rate* is

$$\frac{S}{YD} = 1 - c_1 - \frac{c_0}{YD}$$

which has three implications:

1. People with high incomes have higher savings rates
2. Savings rates should rise in booms, fall in slumps
3. Savings rates should trend upward with per capita income

STYLIZED FACTS ABOUT SAVINGS RATE

1. Rich people save more

2. Saving is procyclical

3. However, *no trend* in savings rate

How can this puzzle be resolved?

Permanent income hypothesis: people estimate the present value of their lifetime income and wealth, then choose a steady consumption level with same present value

This suggests that consumption should depend on normal or “permanent” income, not necessarily actual income in a given year.

EXPLAINING THE STYLIZED FACTS

Say that YP is permanent income, and that $C = c \times YP$.

Savings rate is $(YD - C)/YD = (YD - c \times YP)/YD$

$= 1 - c \times YP/YD$

So savings will be high when YD high compared with YP, low when YD low compared with YP

1. High income people save more: a sample of people with high incomes will contain a disproportionate number of people with *unusually high* incomes, i.e., people having a particularly good year. Low income group contains disproportionate number of people having a particularly bad year. Hence savings-income relationship

2. A boom is an unusually good year for most people - hence high savings; a recession an unusually bad year, hence low savings.

3. Over long run, economic growth raises actual and permanent incomes together, hence no trend in savings rate

HOW RATIONAL ARE CONSUMERS?

1. *Does current income matter*? If people really based consumption only on lifetime income, one year's income should have very little effect. It should matter only to the extent that one year is an indicator of future income. However, most studies suggest that consumption responds much more to current income than it "should".

2. *Do people take into account known changes in income, e.g. future taxes*? "Ricardian equivalence" says that consumption should depend on what the gov't *spends*, not on its current tax rates: if the gov't spends more, it must eventually raise the taxes, so the present value of tax burden is the same whether it raises taxes now or borrows the money and raises taxes to service the debt later. (Conversely, a tax cut without spending cuts to "finance" it shouldn't raise consumption). No evidence, however, to suggest that people - even economists! - do such calculations

The case of Japan: Will tax cuts increase consumer spending? Or will they simply be saved?

WHY SUPER-RATIONAL CONSUMER MODEL IS NOT QUITE TRUE

1. *Bounded rationality*: It just isn't worth making all those calculations. Time spent understanding the implications of current government policies for the future budget would better be spent learning a skill, shopping for discounts, whatever

2. *Risk aversion*: Better to be safe, and not spend beyond your income, even if you probably can afford it

3. *Liquidity constraints*: It is hard to borrow to finance consumption, and if possible usually takes place at high interest rates

All of these reasons mean that consumption depends more on current income, less on expectations, than extreme model. But they do *not* mean that simple consumption function works. Expectations have major impact on consumption.