Discussion: Insuring Consumption Using Income-Linked Assets

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The vision

- This is a paper driven by a vision that a new financial order is possible. Shiller (1993, 2003) thinks that we should introduce new financial instruments to make market more complete. In particular better financial arrangements are possible to insure workers against idiosyncratic shocks to labor income.

- The costs of idiosyncratic risk in labor income is large: between 16 percent and 40 per cent of expected life time consumption, according to estimate from this paper, Pijoan-Mas (2005), and Heathcote, Storesletten and Violante (2008)

This paper considers a relatively standard life cycle model: finite horizon, partial equilibrium, permanent and transitory shocks to labor income. Individual can invest in stocks and bonds. They can borrow at a rate that substantially exceeds the return on the riskless bond. The model is then used to quantitatively study the welfare gains of allowing individuals to trade the following two financial instruments:

1. An Income-Hedging Instrument (IHI): a limited liability asset whose returns are correlated negatively with income shocks

2. Income-linked loans (ILL): a loan with a rate positively correlated with income shocks. The expected rate is equal to the expected riskless borrowing rate already exhisting (equal to 8 percent)

IMPORTANT: Income Hedging Instrument and Income Linked personal Loans should be partly based on Income Indexes (index of income in one occupation, industry or region) to reduce moral hazard). This implies that correlations can not be greater (in absolute value) than 0.5.

The main results

- The model fits reasonably well key features of earnings, portfolio decisions, and consumption dynamics over the life cycle
- Simple instruments are not very useful Welfare gains are strongly convex in the correlation between returns and labor income shocks. Welfare gains are small unless the correlation is implausibly high
- Specific design of instruments matter Welfare gains depend on the cost differential between borrowing and lending and the volatility of returns
- Agents want to borrow ILL yields greater welfare gains than IHI (in baseline calibration an increase of 1.4% in life time consumption against an increase of almost zero). As a result IHI is little demanded.

Individuals want to borrow

Figure 6.3: Life Cycle Pattern of Labor Income and Nondurable Consumption

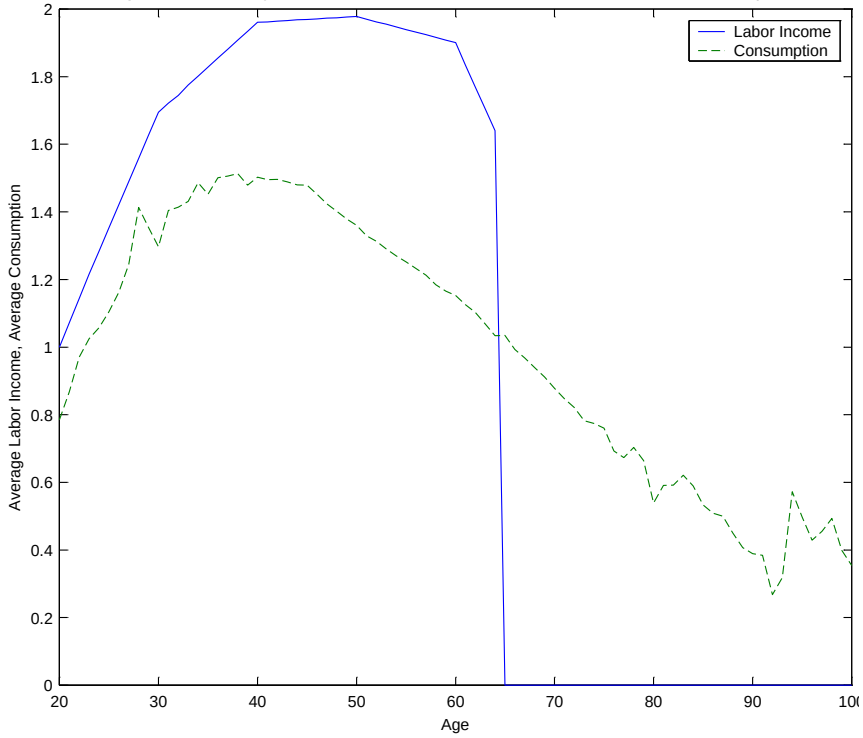
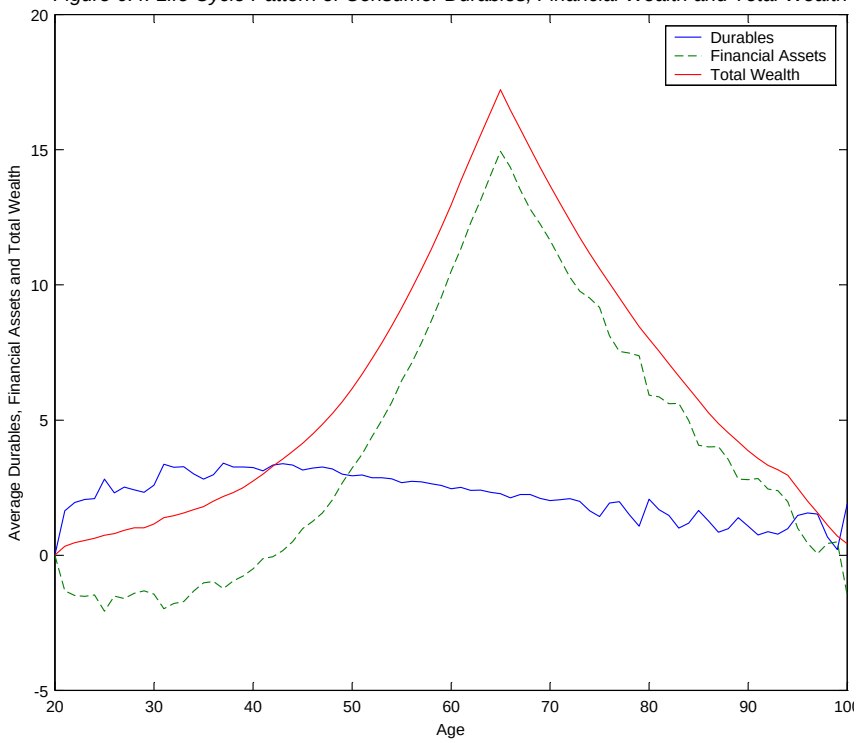


Figure 6.4: Life Cycle Pattern of Consumer Durables, Financial Wealth and Total Wealth



ILL provides a cheaper borrowing technology

General comment Nice and competently executed paper. Evaluating the gains from completing market with relatively simple financial instruments is an important and relevant question. We all face much risk over our working life and we want to reduce it to maximize welfare. Can financial markets help? I am a big fan of this research effort. I will just make some minor comments.

Do we really want a new financial order?

- Would people understand the exact functioning of instruments? My experience with Financial Management Assistants has not always been fantastic. I always have the feeling of discovering new fundamental clause just along the way.....

- There is much mobility across regions, industries and occupations. These instruments could affect incentives by affecting geographical mobility or incentive to change occupation or industry. Some of these effects might be welfare improving (if there is under-investment in occupations with high idiosyncratic risk or under-investment in occupation specific human capital).

- Can private market provide these instruments? Adverse selection and lemon problems could lead to disappearance of insurance markets. Suppose skill is about taking advantage of income possibility in one occupation $w = \mu Y$, w is individual wage, μ individual skill and Y occupation-specific factor. Also suppose that individuals who have high μ in one occupation also have a high μ in other occupations (i.e. skill provides insurance). Then workers with low μ are the most interested in these assets while individuals with high μ change occupation in response to adverse shocks. If μ is unobservable, this could create a standard lemon problem where providing insurance could become too costly for private markets to be willing to offer it and individuals to be willing to buy it.

- Why people buy stocks in the firm where they work? Isn't this a puzzle for the advocates of the new financial order?

Are these instruments useful?

It would be nice to provide evidence that these financial instruments would help in completing markets. It is not obvious that introducing financial instruments whose return is indexed to labor income in one occupation would complete markets. There could already be other financial instruments that have a negative correlation with several occupation labor income. This is important because if these new instruments do not make markets more complete it is unclear why they would help. Moreover most individuals below 40's (those for which labor income risk is most important) invest very little of their wealth in financial markets.

Where is the government?

- In practice much of this insurance is provided by government (unemployment insurance, early retirement pensions, health assistance, disability support pensions etc.). Shiller argues that there are unexploited gains from introducing new financial assets whose return is linked to individual labor market risk.

- But to evaluate welfare gains it would be nice to have these institutions in the model. As a result I take the number in the paper as an overestimate of the (already small) potential welfare gains.

So Many Income Processes!

The paper uses a model of earnings dynamics. A problem with this is that many models of earning dynamics are present. This could matter for quantitative results.

Guvenen (2007): HIP model (individual fixed effect in wage growth). The persistence of the transitory component falls substantially.

Blundell and Preston (1998), Meghir and Pistaferri (2004): sum of a permanent component (modeled as a unit root process) and a transitory component (often modeled as a Moving Average process).

Storesletten et al (2004, 2007), Heathcote et al. (2007),Bowlus and Robin (2004): all shocks are stationary (plus possibly individual fixed effects)

Linear models are really OK?

Most government interventions are about insuring workers against specific relatively big shocks: disability, health, unemployment. There are sudden big losses in income associated with specific events that could be reasonably well insured by government. Simple correlation may miss them.

Conclusions Nice paper, competently executed, it poses a very interesting and relevant question. It suggests that the gains from a new financial order are small (phew!!!!). It provides some preliminary answers, and leave some questions for further research: great reading!