Discussion
Comments on: “Hong and Ríos-Rull’s ‘Social security, life insurance and annuities for families’”
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When formulating life-cycle models in economics, the economic profession has focused on restrictions on theory from empirical data on consumption, wealth, and leisure. This has yielded substantial progress. However, central aspects of these models must still be regarded as controversial. Two such open questions are how to model families and how to model and measure within-family altruism. The bearing idea of Hong and Ríos-Rull’s research agenda has been to exploit the restrictions imposed on theory by a new class of empirical data: the purchase of life insurance and annuities. The point is that the purchase of life insurance and annuities contains valuable information about intra-household decisions and preferences.

This paper asks two questions:

1. Could the value of providing annuities be sufficient to explain the introduction of the pension system?
2. What is the welfare effect of completing markets by adding access to private annuities?

To address these questions, Hong and Ríos-Rull (2007) extend their previous work to include or exclude annuity markets. The model is a multi-period overlapping-generations model with exogenous demographics, including marriage, divorce, children and death. In terms of within-household preferences, they assume a standard warm-glow bequest motive (joy of giving to children), no concern for one’s spouse, and that intra-household decision making is determined by a unitary model with fixed planner weights.

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This is not the first paper to quantify the value of the annuity part of social security. However, in the previous literature, this is done in “bachelor” models with non-altruistic agents living as singles. An annuity is a negative life insurance (payment only upon survival). According to data, individuals purchase large quantities of life insurance, which contradicts the bachelor model. In a nutshell, Hong and Rios-Rull (2007) revisit the value of annuities in a model that can account for the purchase of life insurance.

The main finding of the paper is that the value of providing annuities is small or even negative. The intuition for this result is as follows. Annuities insure against involuntary bequests. However, if people have joy-of-giving preferences, then such bequests serve a good purpose for the old. Moreover, for the young, receiving bequests is obviously a good thing. This intuition hints at a key mechanism: there is an externality of giving. The recipient gets full consumption value of the gift, and the donor gets additional utility of giving. Consequently, a planner with sufficient weight on the young would like to encourage more giving than what the complete-market competitive equilibrium yields. Hong and Rios-Rull’s welfare criterion puts all weight on the young. So it is not entirely surprising that completing the markets by adding annuities can actually lead to worse outcomes than the competitive equilibrium in the incomplete-market economy.

But this argument has implications beyond the issue of provision of annuities—it could also be made for other types of government-provided social insurance where the provision crowds out intra-family gifts and risk sharing. For example, suppose that household members have reciprocal altruism which is sufficiently strong to sustain intra-household unemployment insurance. Once the government starts to provide its own unemployment benefits, some of the private arrangements will be crowded out (see e.g. Attanasio and Rios-Rull, 2000). Because of the reduction in private gifts (for which there is an externality), more social insurance can lead to worse outcomes, even when abstracting from potential distortions of raising tax revenue.

Returning to the finding of a small or negative welfare of providing annuities—how robust is this result? The argument of Hong and Rios-Rull hinges on all agents being unconstrained in life insurance: since all agents by assumption have the same deep bequest motive (after taking account of spouse and children), the estimated preferences imply a large joy-of-giving motive and, hence, little value of annuities.

As an alternative to Hong and Rios-Rull’s model, consider an economy where agents differ in the strength of their joy-of-giving motive (or, more generally, their deep altruism) and that the population partly consists of families who do not want to give any bequests and partly of families who do have a joy of giving (as in Hong and Rios-Rull’s model). 1 Suppose further that the market provides life insurance but no annuities (due to, say, financial frictions). 2 This amounts to assuming that agents cannot sell life insurance short (since being long in annuities is equivalent to being short in life insurance). Finally, assume that the government contemplates removing the annuity part of the pension system. Agents with a strong concern for children could then just undo the changes in the mandatory pension annuity by reducing their purchase of life insurance in the market,

1 In principle, such heterogeneity might be identified from the dispersion in purchase of life insurance (note that there are large differences in purchase of life insurance, even after controlling for age, education, number of dependents, etc.).

2 Clearly, if annuity assets could be created by only incurring a negligible transactions cost, then it is almost trivial that if such an asset is not traded, it must be because the demand and, hence, the potential welfare gain, are really small.
precisely as in Hong and Rios-Rull. The welfare effect should be small for this group of agents. However, agents with little concern for dependants will be constrained because of no short selling of life insurance; since they had no concern for their children, they purchased much less life insurance in the first place. Consequently, the removal of annuities can have a large and negative welfare effect for these agents. This example shows that the size of public annuities can have an asymmetric effect on agents with different bequest motives, and such heterogeneity in bequest motives could potentially suffice to overturn the main conclusion of Hong and Rios-Rull.

The key accomplishment of Hong (2005) and Hong and Rios-Rull (2004, 2007) is to provide a class of models that can broadly account for the purchase of life insurance and annuities. Their model is estimated to ensure that the model can replicate age-profiles of life-insurance holdings for men and women, married and singles. A careful examination of how data compares with the model’s implications reveals that it can account quite well for men’s life-insurance holdings but that the fit for women is less good. In particular, for women the model implies too little life insurance before the age of 50 and too much life insurance after the age of 50. Moreover, the estimated differences between married women and married men in the so-called “marriage experience” seem somewhat large. Bottom line, even though these papers have improved our understanding of the purchase of life insurance and (the lack of purchase of) annuities, I believe that more research is needed. Hong (2005) has explicitly modelled home production. It would also be interesting to consider richer models of altruism and perhaps preference heterogeneity.

References