Discussion of: *Competition, Asymmetric Information, and the Annuity Puzzle*

Jean-François Houde

Department of Economics
University of Wisconsin & NBER

November 1, 2018
Overview

- This is a very ambitious paper.
Overview

- This is a very ambitious paper.
- Estimate a life-cycle model of consumption and saving to quantify the importance of adverse (and advantageous) selection into the Chilean annuity system.
Overview

- This is a very ambitious paper.
- Estimate a life-cycle model of consumption and saving to quantify the importance of adverse (and advantageous) selection into the Chilean annuity system.
- Key differences relative to the US:
  - *Competitive exchange:* At retirement, compete for individuals via an open platform (individualized pricing)
  - *Public option:* Individuals choose between private options and a governmental plan (PW) [≠ social security]
  - High take-up rate of the private option: over 60%
Overview

- This is a very ambitious paper.
- Estimate a life-cycle model of consumption and saving to quantify the importance of adverse (and advantageous) selection into the Chilean annuity system.
- Key differences relative to the US:
  - *Competitive exchange*: At retirement, compete for individuals via an open platform (individualized pricing)
  - *Public option*: Individuals choose between private options and a governmental plan (PW) [≠ social security]
  - High take-up rate of the private option: over 60%
- **Research question**: What would the Chilean market look like if it adopted a US-like Social Security system?
Price discrimination? Probably not... unless less-wealthy individuals have low price elasticity.

Markup differences more likely explained by: (i) binding reserve price, and/or (ii) lack of competition.

What is the role of agents? Offers are "renegotiated" by 2% on average. More likely for agent-based transactions?

Comment 1: Competition in the exchange

Markup: \( (W - NPV(z))/NPV(z) \)
Price discrimination? Probably not... unless less-wealthy individuals have low price elasticity. Markup differences more likely explained by: (i) binding reserve price, and/or (ii) lack of competition. What is the role of agents? Offers are "renegotiated" by 2% on average. More likely for agent-based transactions?

Comment 1: Competition in the exchange

Markup: \( (W - NPV(z))/NPV(z) \)

Offered Markups by Wealth

Discussion: Illanes and Padi
Comment 1: Competition in the exchange

Markup: \( (W - NPV(z))/NPV(z) \)

- Price discrimination? Probably not... unless less-wealthy individuals have low price elasticity.
- Markup differences more likely explained by: (i) binding reserve price, and/or (ii) lack of competition.
Comment 1: Competition in the exchange

Markup: \((W - NPV(z))/NPV(z)\)

- Price discrimination? Probably not... unless less-wealthy individuals have low price elasticity.

- Markup differences more likely explained by: (i) binding reserve price, and/or (ii) lack of competition.

- What is the role of agents? Offers are “renegotiated” by 2% on average. More likely for agent-based transactions?

Discussion: Illanes and Padi
Comment 1: Competition in the exchange

![Graph showing Fraction Annuitizing by Wealth](image)

Discussion: Illanes and Padi
Comment 1: Competition in the exchange

Why do we see a decline for wealthy individuals?
Comment 2: “WTP” and adverse-selection

Average cost (fair annuity): \( W = \sum_t \frac{h(t)}{(1+r)^t} \bar{z} \)
Comment 2: “WTP” and adverse-selection

Average cost (fair annuity): \[ W = \sum_t \frac{h(t)}{(1+r)^t} z \]
Comment 2: “WTP” and adverse-selection

Average cost (fair annuity): \( W = \sum_t \frac{h(t)}{(1+r)^t} z \)

Illustration question: Is it possible to draw **downward** sloping demand and average cost curves?
Comment 2: “WTP” and adverse-selection
US Social Security: Mandatory annuitization ↓ WTP for private annuities
Comment 2: “WTP” and adverse-selection
US Social Security: Mandatory annuitization ↓ WTP for private annuities

- Shouldn’t the indifference point move right? (not left)
- How would advantageous selection change this intuition?

Discussion: Illanes and Padi
Comment 3: Structural model

- **Goal:** Identify the joint distribution of risk aversion, initial wealth, bequest motive, and mortality risk.
- **Method:** Finite-mixture approximation of the non-parametric CDF.
Comment 3: Structural model

- **Goal:** Identify the joint distribution of risk aversion, initial wealth, bequest motive, and mortality risk.
- **Method:** Finite-mixture approximation of the non-parametric CDF.
- **Question:** How are observed characteristics used in the estimation of the mixture probabilities?
Comment 3: Structural model

- **Goal:** Identify the joint distribution of risk aversion, initial wealth, bequest motive, and mortality risk.
- **Method:** Finite-mixture approximation of the non-parametric CDF.
- **Question:** How are observed characteristics used in the estimation of the mixture probabilities?
- **Identification:** *Loosely speaking, this [rank condition] requires that different types make different choices when faced with the same annuity contract offers.*
  - In other words... We can identify unobserved heterogeneity in the model if there is enough unobserved heterogeneity(!)
Comment 3: Structural model

- **Goal:** Identify the joint distribution of risk aversion, initial wealth, bequest motive, and mortality risk.

- **Method:** Finite-mixture approximation of the non-parametric CDF.

- **Question:** How are observed characteristics used in the estimation of the mixture probabilities?

- **Identification:** *Loosely speaking, this [rank condition] requires that different types make different choices when faced with the same annuity contract offers.*
  - In other words... We can identify unobserved heterogeneity in the model if there is enough unobserved heterogeneity(!)

- **Suggestion:**
  - Contrast finite-mixture results with parametric models.
  - Example: Joint normal, or two dimension of heterogeneity as in Cohen and Einav.

Discussion: Illanes and Padi
Comment 3: Structural model

- **Identification threat:** Endogenous prices
Comment 3: Structural model

- **Identification threat:** Endogenous prices
  - If (some) prices are renegotiated ex-post, the fact that 19% of consumers accept dominated options might imply that prices are measured with error.
  - Two observationally identical individuals accept different prices: Unobserved heterogeneity in taste preference or mis-measured prices?
  - If renegotiation is correlated with how people shop (e.g. agents or not), this could be correlated with types.
Comment 3: Structural model

- **Identification threat:** Endogenous prices
  - If (some) prices are renegotiated ex-post, the fact that 19% of consumers accept dominated options might imply that prices are measured with error.
  - Two observationally identical individuals accept different prices: Unobserved heterogeneity in taste preference or mis-measured prices?
  - If renegotiation is correlated with how people shop (e.g. agents or not), this could be correlated with types.
  - *Suggestion (robustness check):* Replace transaction payments with lowest bid, or lowest payments + risk adjustment (e.g. hedonic)
Comment 3: Structural model

- **Identification threat:** Endogenous prices
  - If (some) prices are renegotiated ex-post, the fact that 19% of consumers accept dominated options might imply that prices are measured with error.
  - Two observationally identical individuals accept different prices: Unobserved heterogeneity in taste preference or mis-measured prices?
  - If renegotiation is correlated with how people shop (e.g. agents or not), this could be correlated with types.
  - *Suggestion (robustness check):* Replace transaction payments with lowest bid, or lowest payments + risk adjustment (e.g. hedonic)

- **Suggestion:** Provide more details + intuition on the identification of the relative importance of adverse/advantageous selection
  - Better summarize the correlations across types and implications for WTP and Average Cost
  - Connect identification of unobserved heterogeneity with reduced-form tests for adverse/advantageous selection (e.g. Chiappori and Salanié test + Fan et al.)