

Is the gender gap in finance a gap in familiarity? The effect of a pink portfolio on investor behaviour

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Could the 'gender gap' be partly caused by unfamiliarity with commonly traded stocks and reduced by familiarity with 'pink' stocks?

- *Motivation:*
 - lower stock market participation disadvantages women
- *Existing explanations* (lower financial literacy; lower risk tolerance) appear incomplete.
 - Perhaps familiarity is a factor?
- *Method:*
 - Conduct online choice experiment using treatments in 'feminised' stock portfolio v. traded stocks; also test an order effect.

- *Findings:*

- *More women than men refuse to participate*
- *1/n (50:50) strategy dominates*
- *Order effect (i.e., allocating more to the first asset listed) is stronger for women than men*
- *Content of the stock portfolio does NOT seem to matter, except for older women.*
- *Women spend less time deciding in the 'pink' condition, on average*

What is 'familiarity'?

- Individuals hold stocks of firms that are from home country, geographically close, traded on local exchanges, employer stocks, etc.
- Why?
 - Mere exposure creates positive affect (Zajonc 1968)
 - Source preference – individual feels more competent in some areas of uncertainty (Trautmann and van de Kuilen 2013)
 - Lower ambiguity with higher familiarity – less ambiguity aversion (Merton 1987; Boyle et al. 2013)
- This study uses 'brand' familiarity based on ads in popular women's magazines as a proxy for stock familiarity

Pink portfolio 'familiarity' needs to be pre-tested

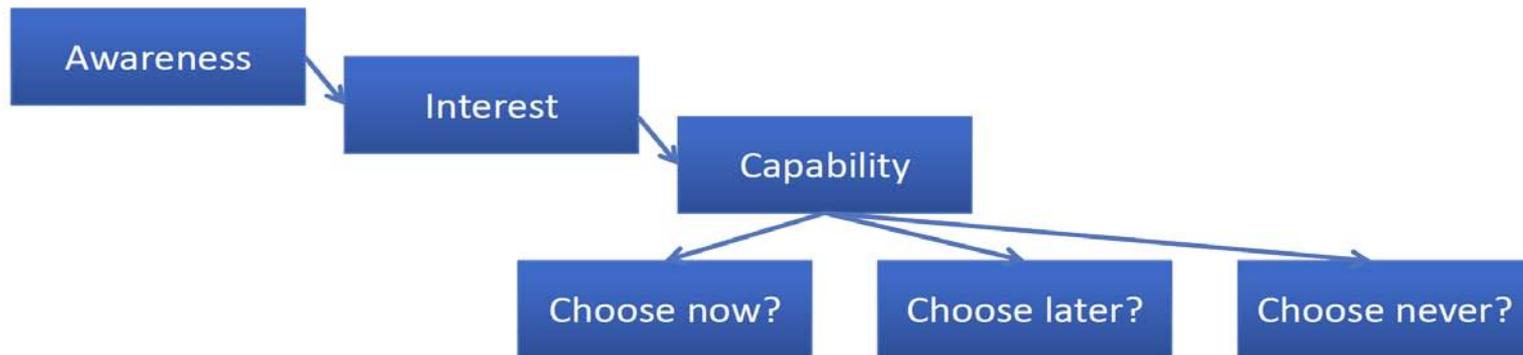


- Which *stocks* are more familiar to women?
- Which women?
- Does familiarity create positive affect here?
- Does familiarity reduce ambiguity?

Is there a more fundamental familiarity problem?

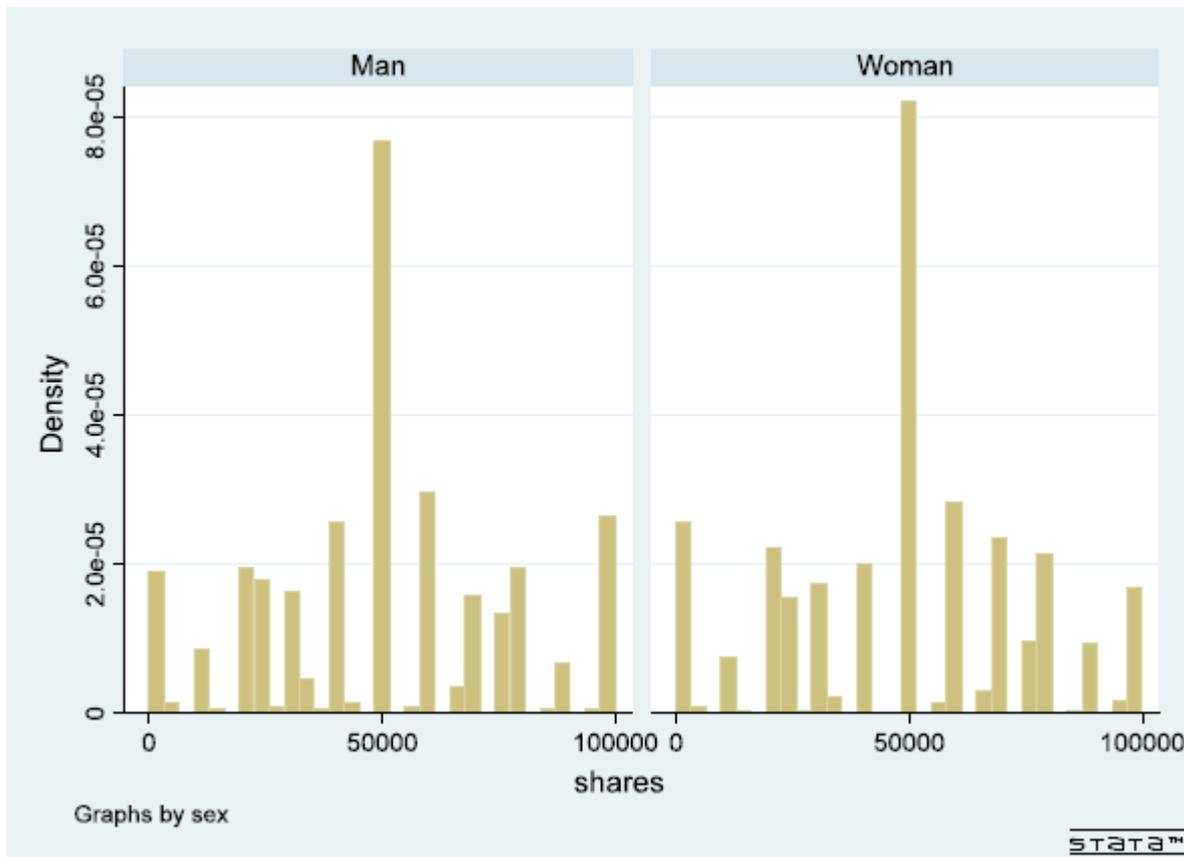
- Are women familiar with...
 - Investment of retirement savings?
 - Stocks?
 - Bonds?
- High *drop out rate* suggests the investment decision is unfamiliar/ambiguous
- High *use of heuristics* (1/n; order effects) suggests that stocks and bonds as asset class are unfamiliar/ambiguous

Investigate what is the decision state of the survey participant.



- **Decision States (consumer funnel) models help classify people at different stages** (Murray and Vogel 1997, Wijaya 2012, Kireyev et al. 2013)
- **Discriminate individuals by personal, market related and institutional factors etc then consider their decision**

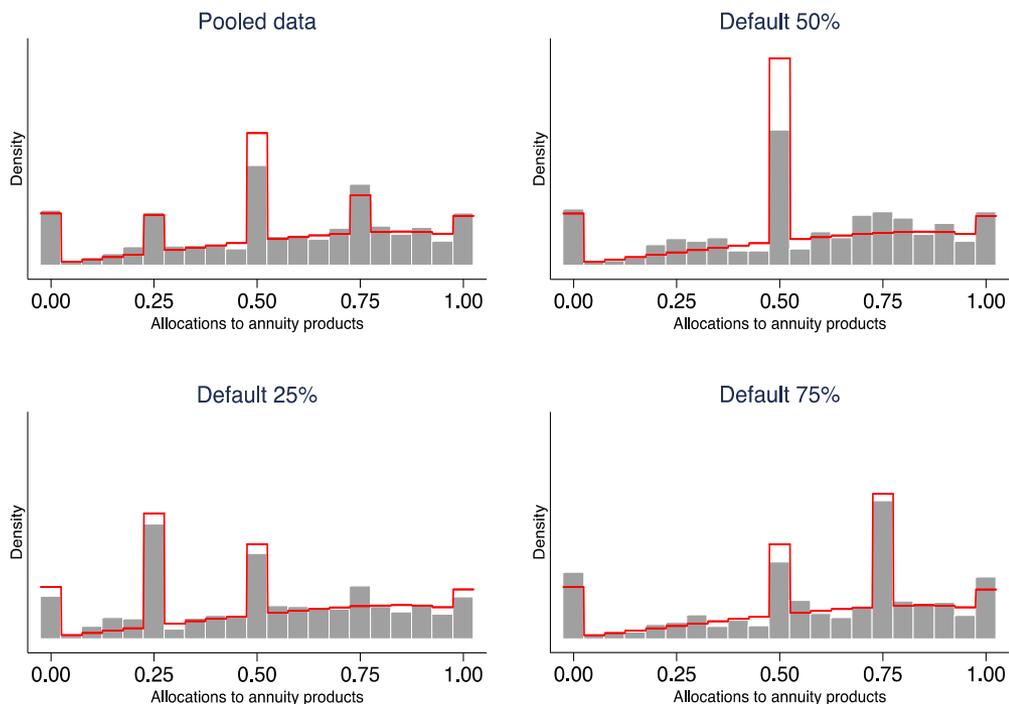
Estimating a model is challenging.



- 50:50 or $1/n$ heuristic?
- Focal points at extremes, 25:75?, 60:40?
- Discrete mixture model?

Example of multi-modal data model from retirement savings allocation experiment (annuity v. phased withdrawal)

Observed choices and fitted mixture distributions



Mixture of 5 distributions:

- **1/n heuristic:** choosing 50% allocation certainty;
- **Default heuristic:** choosing the default allocation with certainty;
- **Extreme heuristic 1:** allocating 0% to the annuity with certainty;
- **Extreme heuristic 2:** allocating 100% to the annuity with certainty;
- **Unconstrained,** given by the beta-binomial distribution (reflects rational choice)

Time as a proxy for familiarity?

- **Detail the distribution of time – Are there outliers driving the averages?**
- **Interpretation is unclear – often u-shaped relationship between interest in the task and time to completion**
- **Include checks of respondent involvement for conditioning (instructional manipulation checks)**

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