BeFi Web Seminar for August 27, 2008
Defaults and Behavioral Outcomes

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Introduction: Should Defaults Impact Economic Outcomes?

- Standard economics theory: *If transactions costs are small, defaults should not matter*
- In practice, defaults have sizeable effects
  - Organ donation
  - Car insurance
    - Limited vs. full right to sue
    - Collision/loss/damage waivers and rental cars
  - Consent to receive e-mail marketing
  - Financial markets
Defaults and Organ Donation

- Different organ donation defaults
  - Informed consent (United States): organs available for donation *if individuals/family explicitly consent*
  - Presumed consent: organs presumed available for donation *unless individuals/family explicitly object*
Defaults and Organ Donation

- Abadie and Gay (2006)
  - Compare organ donation rates in 22 countries
  - 10 year time-period
- Control for
  - Economic differences
  - Demographics
  - Social characteristics
- Presumed consent $\rightarrow$ 25% to 30% increase in organ donations

![Graph showing increase in organ donation rates](image)

- Informed consent (actual): 21
- Presumed consent (predicted): 27

Cadaveric donation rates per 1 million population

25-30% Increase
Defaults and Saving: 401(k) Automatic Enrollment

- Standard savings plan enrollment: opt-in
- Automatic enrollment: opt-out
  - Employer specifies default contribution rate and asset allocation
  - Employees have pre-specified time period (e.g., 30 days) to opt-out

- Company A
  - December 2000: 3% + money market fund
    - New hires going forward
    - Currently non-participating employees
  - October 2001: 6% + money market fund
    - New hires going forward
Automatic Enrollment for New Hires and Savings Plan Participation: Company A

Before AE

After AE 6% default

After AE 3% default

Fraction ever participated

Tenure (months)
Automatic Enrollment for New Hires and the Distribution of 401(k) Contribution Rates: Company A (15-24 months tenure)

- Automatic enrollment: 3% default
- 6% default

Match threshold + automatic enrollment

**Contribution Rate**

- Hired under automatic enrollment (6% default)
- Hired under automatic enrollment (3% default)
## Automatic Enrollment and Asset Allocation Outcomes

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Defaults and Asset Allocation

- Automatic Enrollment
- Company match in employer stock (Choi, Laibson and Madrian, 2005b and 2007)
- Private account component of Swedish Social Security system (Cronqvist and Thaler, 2004)
  - Enrolled at the transition: one-third of assets in default fund
  - Subsequent enrollees: 90+% of assets in default fund
- Chilean Social Security system (Rozinka and Tapia)
  - 70+% of participants retain the default allocation
Defaults and Pre-Retirement Cash Distributions from Savings Plans

- What happens to savings plan balances when employees leave their jobs?
  - Employees can request a cash distribution or roll balances over into another account
  - Historical default (before 2005)
    - Balances >$5000: stay with former employer
    - Balances <$5000: cash distribution
  - Outcomes (Choi et al. 2002, 2004a and 2004b)
    - Balances <$5000, 70% receive a cash distribution
    - Balances >$5000, <33% receive a cash distribution
Defaults and Pre-Retirement Cash Distributions from Savings Plans

Likelihood of Receiving a Cash Distribution

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<th>Balances &lt;$5000</th>
<th>Balances &gt;$5000</th>
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<td>65% to 75%</td>
<td>20% to 33%</td>
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DEFAULT
Post-Retirement Distribution Alternatives

- **Social Security**
  - Joint and survivor annuity (reduced benefits)

- **Defined benefit pension**
  - Annuity
  - Lump sum payout if offered

- **Defined contribution savings plan**
  - Lump sum payout
  - Annuity if offered
Defaults and Defined Benefit Pension Annuitzation

- Annuity income and economic welfare of the elderly
  - Social Security replacement rate relatively low on average
  - 17% of women fall into poverty after the death of their spouse (Holden and Zick 2000)
- For married individuals, three distinct annuitization regimes
  - Pre-1974: no regulation
  - ERISA I (1974): default joint-and-survivor annuity with option to opt-out
  - ERISA II (1984 amendment): default joint-and-survivor annuity, opting out requires notarized permission of spouse
Defaults and Defined Benefit Pension Plan Annuitization

- Effect of joint-and-survivor default on annuitization
  - Pre-1974: Less than half of married men have joint-and-survivor annuity
  - Post-1984 amendments: joint-and-survivor annuitization increases 5 to 10 percentage points (Saku 2001)
Defaults and Defined Benefit Pension Plan Annuitization

Fraction of Defined Benefits Pension Annuitants with Joint and Survivor Pension

- <50%
- 5% to 10%
- 15% to 20%

Legend:
- ERISA II (post-1984)
- ERISA I (1974-1984)
- Pre-1974
Explaining the Impact of Defaults: Complexity

  - 38% of respondents report that they have little or no financial knowledge
  - 40% of respondents believe that a money market fund contains stocks
  - Two-thirds of respondents don’t know that it is possible to lose money in government bonds
  - Respondents on average believe that employer stock is less risky than a stock mutual fund
  - Two-thirds report that they would be better off working with an investment advisor than managing investments solo
Explaining the Impact of Defaults: Complexity

- Typical defined contribution savings plan task:
  - Pick contribution rate: options 1% to 15%
  - Pick asset allocation: 10-15 funds
  - Myriad of total options

- Complexity → delay
  - Savings literature: each additional 10 funds → 1.5 to 2.0 percentage point decline in participation (Iyengar, Huberman and Jiang 2004)
Savings Plan Participation and the Size of the Investment Menu

Active Choice and Complexity in the Swedish Premium Pension Plan

Source: Annika Sunden
Explaining the Impact of Defaults: Present-Biased Preferences


- Evidence
  - Participation rates under standard enrollment never exceed those under automatic enrollment
  - Employees, even those with high tenure, forego employer match (Choi, Laibson, Madrian 2007)
Explaining the Impact of Defaults: Endorsement Effect

- The default as advice
- Evidence
  - Automatic enrollment and asset allocation of employees hired before automatic enrollment
  - Automatic enrollment and asset allocation of employees hired after automatic enrollment who move away from the default
  - Elective employer stock allocation in firms that do and do not match in employer stock
### Asset Allocation Outcomes of Employees not Subject to Automatic Enrollment

<table>
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<th>Any balances in default fund</th>
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<td>Hired before, participated before AE</td>
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<td>Hired before AE</td>
<td>9.9%</td>
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<td>Hired before AE</td>
<td>18.2%</td>
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Explaining the Impact of Defaults

● 401(k) automatic enrollment
  ● **Complexity**: automatic enrollment decreases the dimensionality of the decision-making task faced by non-participants
  ● **Endorsement effect**: employer support for saving
  ● **Present-biased preferences**: overcomes individual tendency to procrastinate
Who is Most Impacted by Defaults

- Those lacking expertise
- Those who are busy
  - High time cost of opting out of the default
- Those with a tendency to procrastinate (present-biased preferences)
Alternatives to Defaults

- Defaults work well if:
  - Individuals have similar preferences
  - OR, individuals have different preferences AND cost of opting out is low

- What to do if defaults don’t work well?
  Alternatives to defaults…
  - Reducing complexity
  - Requiring individuals to make a choice (active decision)
Alternatives to Defaults: Reducing Complexity

- **Example: Savings Plan Participation**
  - Give employees an easy way to elect a pre-selected contribution rate and asset allocation bundle

- **Implementation at Company B**
  - New hires at employee orientation: 2% contribution rate invested 50% money market / 50% stable value
  - Existing non-participants: employee selects contribution rate invested 50% money market / 50% stable value

- **Implementation at Company C**
  - Existing non-participants: 3% contribution rate invested 100% in money market fund
Simplified Enrollment and Savings Plan Participation:
Companies B and C

- **Company D:** 4 months after baseline
  - Before: 9%
  - After: 34%

- **Company E:** 3 years after baseline
  - Before: 24%
  - After: 48%
Alternatives to Defaults: Require an Active Decision

- Example: Savings Plan Participation
  - Give employees a deadline and require them to either opt-in or opt-out of participation
  - Potentially very effective when coupled with efforts to reduce the complexity of the task

- Example: Car Insurance
  - If you want to drive (legally), you have to choose a car insurance policy
  - Good example of case where preferences are heterogeneous → single default less appropriate
Requiring an Active Decision and Savings Plan Participation: Company C

Fraction Ever Participated

Tenure (months)

Active Decision Cohort

Standard Enrollment Cohort
Presented by

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Co-Founder, BeFi
Associate Professor Co-chair of the
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The Anderson School at UCLA

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Co-Founder, BeFi
President, Boston Research Group