

Behavioral Economics



Behavioral Economics

The model of economic behavior we have considered in this course is restrictive in a number of ways

- Economic agents are assumed to be perfectly rational
- Agents are assumed to perfectly understand risk and uncertainty
- Agents are assumed to be “self-interested”

In reality, people exhibit a number of departures from this “rational agent” model of decision making

Behavioral economics – Branch of economics that incorporates insights from human psychology into models of economic behavior

Used to help us understand why our models may not make the predictions we think they should in some cases.

Introduction Exercise

- You work for Centers of Disease control and you need to keep American safe.
- There is a sudden and usually flu-like disease that breaks out.
- Your best estimate is that 600 Americans will die from the disease if no government action is taken.
- You are given a choice between 2 programs to address the crisis:
 - Pick what you would do for each program. There are 2 possible responses to the crisis for each program and each cost the same amount, but can only choose one due to resource constraints.

Introduction Exercise

Program 1:

Response A will save 200 people.

Response B is risky. It has a one-third chance to save all 600 people but a two-thirds chance to save no one.

Which do you choose?

Introduction Exercise

Program 2

Response C 400 people will die for certain.

Response D there is a one-third chance that no one will die and a two-third chance that everyone will die.

Which do you choose?

Introduction Exercise

- The framing was different in the two programs but the content for each choice in a program the same.
- Consistent response was A and C, or B and D
- Experiment, 73% picked response A for program 1 while 78% choose response D for program 2.
 - Why? Framing. By manipulating how alternatives were framed researchers could alter choices dramatically.

Behavioral Economics

Behavioral economics is concerned with systematic departures from rational choice

- Behavioral economists attempt to identify systematic “biases”
- Departures from rational choice *can* inform the development of more general, descriptive models of economic behavior
- Models can be used to develop testable hypotheses and predict economic behavior

When Human Beings Fail to Act the Way Economic Models Predict

Some systematic departures from rational choice are:

- Bias 1: Generosity and Selflessness
- Bias 2: Paying Attention to Sunk Costs
- Bias 3: Overconfidence
- Bias 4: Self-Control Problems and Hyperbolic Discounting
- Bias 5: Falling Prey to Framing – introduction example

Bias 1: Generosity and Selflessness

Economic model of rational choice assumes “rational self-interest,” many people often engage in acts of generosity and exhibit **altruism**

- Acts motivated primarily by a concern for the welfare of others
- Donations to charity are the most obvious example

Economists have tried to include this in the model for example by addition someone else’s consumption into your utility function.

- Parent’s utility depends on child’s consumption

Bias 2: Paying Attention to Sunk Costs

- We learned sunk costs do not matter for economic decision making.
- Rational decision makers think at the margin and only consider opportunity costs.
- **Sunk Cost Fallacy:** However, in reality people are influenced by sunk costs in their decision making.
- 1985 Experiment: randomized how much people paid for seasons tickets to Ohio University Theater (\$9, \$13, \$15).
- If the the sunk cost doesn't matter (price of ticket) then the percent of people who go to the show from each group should be the same.
 - But it wasn't. Those who paid more were 25 percent more likely to go than those who got a discount.
- Businesses or gov't can make similar mistakes by keeping on implementing a project that is way over cost and they can't afford even though they may be just 10 percent into the project and would be better off abandoning the project.

Bias 3: Overconfidence

- Individuals believe their skill level and judgment are better than they truly are, or they expect that outcomes are better for them are more likely to happen than they truly are.
- Numerous studies have shown that humans tend to overestimate positive attributes about themselves
 - In one survey, 93% of college students said they were “better than average” drivers
 - On a popular dating website, 73% of individuals describe themselves as having “very good” or “better than average” physical attractiveness

Bias 3: Overconfidence

- Problem: our models assume people have a realistic expectations and base their decisions on facts.
 - Company managers confident in their own abilities maybe more inclined to make bigger investments and take on more risk in the overconfident view they will succeed.

How Economic Markets Take Advantage of Overconfident People

- Firms take advantage of overconfidence
- ✓ **Consider gym memberships: Why do gyms charge monthly memberships instead of per-visit fees?**
- Individuals who sign up for a health club tend to be far too optimistic about the prospects of sticking to their exercise goals
- Health clubs tailor their offerings to exploit such over optimism
- Charging monthly fees allows health clubs to extract surplus from over-optimistic clients

Bias 4: Self-Control Problems and Hyperbolic Discounting

- People have a strong preference for NOW
- A 10% discount rate implies that \$1.00 today is equivalent to \$0.90 next year
- There is evidence that many people have a much higher discount rate when making decisions about immediate consumption

Hyperbolic discounting – Tendency of people to place much greater importance on the immediate present than even the near future when making economic decisions

Bias 4: Self-Control Problems and Hyperbolic Discounting

Problem: Decisions stop being **time-consistent**

- Consistencies in a consumer's economic preferences in a given economic transaction, whether the economic transaction is far off or imminent
- When consumers are not time-consistent, they will, for instance, specify their preferred exercise and diet routine for next week now, but then when they get to next week, they won't want to stick with the plan they set up

Does Behavioral Economics Mean Everything We've Learned Is Useless?

While the rational-choice model is not perfect, it does an excellent job of predicting human behavior in many circumstances

- This model can often be generalized or otherwise extended to account for behavioral anomalies
- Provides a basis for thinking about seemingly irrational behavior, often illuminating rational motivations (e.g., conspicuous charitable donations that improve reputation)

Regardless of individual behavior, markets tend to be coldly rational

- Exposure to markets has been shown to reduce the presence of biased actors and/or behavior

Testing Economic Theories with Data: Experimental Economics

The evidence from psychology and behavioral economics has placed an even greater emphasis on the importance of testing economic models with real data

However, analyzing economic decisions in the real world is very difficult. In response, two subfields of economics have emerged as leaders in the evaluation of economic models: **econometrics** and **experimental economics**

- **Econometrics:** Field that develops and uses statistical and analytical techniques to test economic theory
- **Experimental economics:** Branch of economics that relies on experiments to illuminate economic behavior

These two fields have helped turn economics into a more evidence-based science