



Health Insurance & Behavioral Economics

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Standard Model

Underlying Consumer Choice

- In the standard economic model of consumer choice, individuals are characterized as “... **lightning quick calculators of pleasure and pain.**”
- Built on very strong behavioral assumptions:
 - Rationality
 - Full information on attributes of commodities and their substitutes.
 - Easy to assess the benefits & costs of consumption alternatives.
 - Individuals are constrained by a budget.
 - More choice is welfare enhancing.
- These assumptions of rationality & full information carry over to the standard or benchmark model of health insurance choice.

Benchmark Model of Health Insurance Choice

- Key assumptions:
 - Individuals are risk averse:
 - Prefer a loss with certainty rather than a gamble with the same expected loss.
 - Will incur a certain loss to obtain an uncertain flow of benefits.
 - Are willing to pay a “risk premium” above an actuarially fair insurance premium.
 - Can accurately assess the *probability* of future losses.
 - Can accurately assess *income losses* from adverse events.
 - Can accurately assess the benefits & costs of purchasing or not purchasing insurance.

Implications from the Standard Model

- Value of the standard model is that it provides testable predictions about health insurance choices:
 - More risk averse individuals will purchase more insurance than those who are less risk averse.
 - Generally, as the probability of a loss increases, individuals will purchase more insurance. However,
 - Individuals will not purchase insurance for very large or very small probabilities of income loss.
 - More insurance is purchased as the expected income loss increases.
 - Less Insurance is purchased as its “price” increases.

The Standard Model Confronts Reality

- In reality, health insurance choices are complex:
 - Involve comparisons among a variety of plans, benefits, cost-sharing provisions, & carriers.
- Individuals may not always make optimal health insurance choices:
 - May fail to enroll in insurance when it is free or heavily subsidized.
 - May purchase the “wrong” amount of coverage.
 - May cancel a policy when no loss has occurred.
 - May seek to purchase coverage after an event occurs.
- Why???
 - Not solely due to lack of information regarding plan benefits & costs.
 - May reflect psychological impediments to efficient health plan choice.
- Turn to behavioral economic analysis for insights.

What is Behavioral Economics?

- Applies insights from psychology to help explain actual economic behavior.
- Rejects the idea that individuals are rational, fully informed, & perfectly optimizing agents.
 - Recognizes that individuals:
 - Have cognitive limitations and psychological biases.
 - Tend to be present-oriented rather than future-oriented.
 - Will frequently appeal to “heuristics” or “rules of thumb” to make complex decisions.
 - Have preferences that are mutable, evolve over time, and can be manipulated.
 - Will not always make decisions in their best interests.

Key Concepts in Behavioral Economics

- Bounded rationality:
 - Individuals have limited cognitive resources & time to evaluate information.
- Status quo bias:
 - Individuals prefer the current state of affairs rather than a change in circumstances.
- Choice overload/decision fatigue:
 - When confronted with a large array of choices they become mentally fatigued & may avoid making any choice.
- Heuristics:
 - Individuals will use “rules of thumb” or “mental shortcuts” to make decisions rather than fully considering available information.
- Loss aversion:
 - Individuals are more sensitive to losses rather than gains even if it they engage in risky behavior.
 - More motivated to avoid losses than to secure gains.
- Procrastination:
 - Individuals have limited self control when they commit to a course of action at a specific date.

Key Concepts in Behavioral Economics (continued)

- Present-oriented:
 - Individuals are myopic, valuing the present over the future.
- Framing:
 - Individuals make choices based upon how the selection issue is stated.
- Anchoring:
 - Individuals make estimates based on some convenient number at hand.
- Availability bias:
 - Individuals assess the likelihood of risk based on the occurrence of recent events.
- Representativeness:
 - Individuals assess situations by comparing to some stereotype.
- Optimism & overconfidence:
 - Individuals tend to be unrealistically optimistic even when the risks are high.
- Saliency/ignoring important attributes:
 - Focus on most important attribute of choice when presenting information.

Applying Behavioral Economics to Health Insurance Issues

- Why do some eligible individuals fail to enroll even when health insurance is “free” or heavily subsidized?
 - Optimism and over-confidence regarding risks.
 - Present orientation.
 - Status quo bias.
 - Will procrastinate until ill.
 - How the issue is framed (e.g., certain loss for uncertain future gain).
 - Examples:
 - Under-enrollment in Medicaid & CHIP.
 - Failure to enroll in affordable employer-sponsored health insurance.

- Why are some individuals reluctant to buy high deductible health plans?
 - Myopic loss aversion: individuals consider losses to be more important than gains.
 - Examples:
 - Medigap plans covering part B deductible.
 - Purchase of expensive “Cadillac” health plans.

Applying Behavioral Economics to Health Insurance Issues (continued)

- Why do some individuals purchase “inappropriate” amounts of coverage?
 - Choice overload & decision fatigue.
 - Failure of sponsor to emphasize salient information.
 - Uncertainty about costs & benefits of coverage.
 - Examples:
 - Individual market coverage
 - Medicare Advantage Plans
 - Medicare part D
 - Retiree health coverage
- Why do some individuals remain in the same health plan even when costs, benefits, and personal circumstances change?
 - Status quo bias.
 - Procrastination.

Behavioral Economics & Rationale for Policy Intervention

- Conventional justification for public policy intervention:
 - Rational individuals do not recognize the full social costs and benefits of their actions.
 - Solutions to such “market failures” rely upon taxes or subsidies to achieve optimal behavior.
- The assumption of rationality is compromised when cognitive limitations & psychological biases lead to choices that are both privately & socially inefficient.
 - Standard tax or subsidy solutions to market failure may not be successful in changing behavior.

Behavioral Economics and Public Policy: Improving Health Insurance Choice

- If psychological biases impede optimal health plan choice, public policy can address this “behavioral market failure.”
 - Take steps to align behaviors with the choices of fully-informed individuals would make.
- Policy can design the “choice architecture” so as to **nudge** individuals to alter their choice behavior.
- Nudges are efforts to move individuals in directions that will improve their welfare & thus improve social welfare.
- Nudges can be used in two types of situations:
 - When individuals fail to execute their intended preferences.
 - When individuals have difficulties evaluating the costs & benefits of alternative choices.

Behavioral Economics & Rationale for Public Policy Intervention

- When individuals fail to execute their preferences:
 - May reflect present bias, inattention, complexity of task, or temptation.
 - Approach:
 - Simplify the choice set and application process
 - Reduce the number of options
 - Provide decision aids (e.g., Medicare Part D Plan Finder)
 - Standardize choice options (e.g., Medigap insurance)
 - Provide personalized information specific to the choice context
 - Use reminders targeted at particular groups
 - Auto-enrollment with opt-out provisions
 - Provide feedback
 - Employ commitment devices & planning aids

Example: Personalized Information

	Example 1		Example 2	
	Plan 1	Plan 2	Your plan	Enrollees like you (on average)
Premium/year	\$18,000	\$12,000	\$18,000	\$15,000
Annual deductible	\$250	\$500	\$250	\$350
Estimated cost to you (premium + out-of-pocket expenses)	At least \$18,250	At least \$12,500	At least \$18,250	At least \$15,350
<i>Assumes individual meets deductible.</i>				

Behavioral Economics & Rationale for Public Policy Intervention

- Help individuals evaluate the benefits & costs of alternative choices:
 - Change how the choice is framed.
 - Emphasize gains rather than losses.
 - Alter the order in which health plan options are presented.
 - Use of social comparisons & social norms:
 - Provide individuals with information on their own insurance benefits & costs relative to others in the community.
 - Provide information on risks & consequences using concrete examples:
 - Magnitude of potential loss and realistic probability of incurring loss in the future.
 - The consequences of going without health insurance.
 - Extend the time frame characterizing the likelihood of adverse event:
 - E.g., lifetime risk versus annual risk.

Behavioral Economics & Rationale for Public Policy Intervention

- Help individuals evaluate the benefits & costs of alternative choices (continued):
 - Discourage individuals from purchasing low deductible health plans:
 - Provide information on the relatively small expected benefits of low deductible plans relative to the additional plan costs.
 - Make high deductible plan the “default option” among health plan choices.
 - Enhance health plan literacy.

When Nudges Fail

- Mandates may be necessary:
 - Require individuals to obtain policies to cover risks that they would desire to avoid if they were well-informed but fail to act on given current understanding:
 - Avoid free-rider problem.
 - Individuals contribute toward the provision of specific benefits.
 - Avoid problem of adverse selection.
 - However:
 - May be politically risky.
 - How will penalties be structured?
 - Will salient & immediate penalties address issues of procrastination?

Nudges & the Affordable Care Act

- The ACA draws upon behavioral economic “nudges” to enhance health plan choice:
 - Actuarial values for “metal-level” health plans.
 - Standardized essential benefits within states.
 - Standardized information on plans to consumers.
 - Use of “navigators” to assist with coverage choice.
 - Auto-enrollment in coverage for workers in firms with more than 200 employees.
 - Includes opt-out provision.
 - Use of subsidy calculators to inform consumers of net cost of exchange coverage.

Summing Up

- Behavioral economics challenges the assumption of a rational & fully informed consumer.
- Behavioral economics recognizes that individuals have cognitive limitations and psychological biases that can lead to both privately and socially inefficient consumer choice.
- Behavioral economics provides a justification for interventions to address such “behavioral market failures.”
- Behavioral economics seeks to change the “choice architecture” through the use of “nudges.”
 - When individuals fail to execute their intended preferences.
 - When individuals have difficulties evaluating the costs & benefits of alternative choices.
- However, “nudges” may not always work and may require a mandated approach.
- Several provisions of the Affordable Care Act reflect the influence of behavioral economics.

Sources

- Katherine Baicker, William J. Congdon, & Sendhil Mullainathan. “Health Insurance Coverage and Take-Up: Lessons from Behavioral Economics.” *The Milbank Quarterly*, 90(1) 2012: 107-134.
- Howard C. Kunreuther, Mark V. Pauly, & Stacey McMorro. *Insurance & Behavioral Economics*. New York: Cambridge University Press, 2013.
- Brigitte C. Madrian. “Applying Insights from Behavioral Economics to Policy Design.” Cambridge, MA.: National Bureau of Economic Research Working Paper #20318, July 2014.
- Richard H. Thaler & Cass R. Sunstein. *Nudge: Improving Decisions about Health, Wealth, & Happiness*. New Haven: Yale University Press, 2008.
- Thomas Rice. “The Behavioral Economics of Health and Health Care.” *Annual Review of Public Health*, 34, 2013: 431-447.