

Behavioral Economics: Policy Impact and Future Directions

Brief for Policymakers

The principles of behavioral economics have been applied in the development of policies to pursue important public policy goals such as promoting health and combating climate change. Researchers have accumulated a substantial body of evidence about how behavioral economics principles work in practice.

INTRODUCTION

A study that assessed the contributions of the behavioral economics to public policy, carried out by the National Academies of Sciences, Engineering, and Medicine at the request of the Sloan Foundation and the National Institutes of Health (NIH) reviewed this research to identify themes, commonalities, and lessons. The Committee on Future Directions for Applying Behavioral Economics to Policy, whose members have expertise in economics, behavioral economics, health policy and behavioral design, psychology, cognitive science (e.g., judgment and decision making), methodology, and public policy, was appointed to carry out the study.

The committee recognized that a systematic review of behavioral economics research across all relevant domains was not feasible; instead, they determined that an overview of a varied subset of fields would best meet the charge and focused their work in six domains: health, retirement benefits, social safety net benefits, climate change, education, and criminal justice. These six domains are all policy domains of prime importance to society in which behavioral ideals have been tested.

The committee identified five behavioral principles that affect people's decision making:

- Limited Attention and Cognition
- Inaccurate Beliefs
- Present Bias
- Reference Dependence and Framing
- Social Preferences and Social Norms

These core principles of behavioral economics have been tested repeatedly across the six domains the committee studied. The evidence for the importance of these principles and value in the design of policy interventions is, therefore, well established. A large and growing array of tools have been developed using the evidence about influences on behavior, and interventions that have been tested for effectiveness. There is clear and strong evidence that specific interventions based on behavioral economics principles have been effective at changing targeted behaviors, but matching the tool to the challenge, the circumstances, and the target population is critical to success and requires careful attention.

There is strong empirical evidence of effectiveness for four strategies:

- use of default options to guide people to optimal choices, such as employers making enrollment in automatic contributions to retirement savings the default so that people must actively decline if they do not want to enroll;
- simplification or removal of hassle factors, such as allowing users to complete an action online instead of by mail or in person;
- immediacy, such as offering an incentive for an action taken that is delivered immediately (e.g., a \$10 gift card); and
- framing and design of choice sets, such as designing choice sets to reduce comparison friction (the cognitive burden caused by having to compare choices across multiple attributes without sufficient information).

More mixed or less robust evidence supports two additional strategies:

- behaviorally informed incentives, such as rewarding individuals for gym visits above a certain frequency threshold, and
- implementation prompts, such as sending postcard reminders for flu vaccinations.

The interventions that show the strongest effects all targeted specific behavioral issues that are relevant to the problem that the intervention was designed to address in a precise way. The intervention strategies for which the evidence is mixed highlight the importance of applying human-centered design and related approaches to the selection and refinement of behavioral interventions in specific contexts. These interventions appear to show effectiveness when tailored precisely to specific circumstances and populations: this effectiveness is clearly shown in studies across the six domains studied. Thus, evaluations of behavioral interventions are most valuable when they incorporate rigorous examination of specific group treatment effects.

FINDINGS FROM THE DOMAINS

As mentioned above, the six domains studied were chosen to represent a range of areas of prime policy importance in which behavioral economics principles have been applied. But some of these domains have been the subject of far more research than others. Health was the domain for which the committee found the most research, while criminal justice has received the least research attention, despite a strong potential for benefit in this domain.

Health Evidence demonstrates the value of modest, low-cost interventions that target very specific challenges. The evidence also shows the cumulative value of small-scale, low-cost interventions. Positive effects from behaviorally-based interventions have been demonstrated for lowering barriers to medication adherence; promoting health practices such as colorectal cancer screening, HIV prevention and adherence to treatment, and vaccination; and strengthening providers' adherence to practice guidelines.

Retirement savings The strongest result in the committee's review of the six domains is that making retirement savings a default choice for employees is consistently effective. A substantial body of research has confirmed this finding and tested variations in how it can be done. Positive effects have been demonstrated across a wide variety of settings; this behavioral design is easily generalized. The evidence on retirement savings has been so strong that it has influenced federal legislation.

Social Safety Net benefits The evidence on the effectiveness of low-cost nudges to encourage people who are eligible to participate in social safety net programs is mixed, with some interventions showing modest effects on take-up but others showing no significant effect or any effect at all unless the study population includes households that have previously participated in the program. A few more costly large-scale interventions, particularly those implemented by U.S. Department of Agriculture for the Supplemental Nutrition Assistance Program, have shown positive effects on take-up by providing additional

information and by simplifying application forms and otherwise reducing the administrative burden.

Climate change Across a range of efforts to encourage people to adopt behaviors that help to combat or mitigate the effects of climate change, the evidence demonstrates the high value of targeting specific concerns, as well as the cumulative value of multiple small-scale, low-cost interventions. Providing information to consumers to address present bias and limited attention and cognition and using nudges related to social norms and preferences have been shown to encourage energy conservation, climate-friendly transportation decisions, and engagement in land use conservation programs, when

Education A more limited body of work has pointed to potential benefits of behaviorally informed strategies to support education goals. The use of low-touch nudges, such as goal setting, reward programs, text reminders, and efforts to increase parents' engagement with their young children to improve literacy, can directly address issues with limited attention and present bias to increase the effectiveness of those interactions. Several interventions have increased college application and applications for financial aid: reducing the administrative burden of the applications; providing support to students for these tasks; and setting up default choices for high school students, such as automatic registration for college admissions tests.

Criminal Justice Behavioral factors influence all points in the criminal justice system: determinants of criminal behavior, policing practices, court proceedings, judicial decision making, and incarceration. Although the evidence is limited, enough research has been conducted to suggest a considerable potential for their effectiveness.

LESSONS

The strongest effects were apparent where interventions have precisely targeted specific behavioral issues: across all six domains, the evidence points to the high value of targeting an intervention to a particular population and set of circumstances. The evidence also supports

the cumulative value of multiple small-scale, low-cost interventions.

Most of the available evidence that demonstrates positive effects is for interventions that bring about short-term or one-time effects. Although some one-time changes can have lasting effects, strategies for bringing about persistent or sustained change have not often been examined; achieving longer-lasting effects is likely to prove much more challenging. It is difficult to change habits with a single light-touch or nudge intervention; multiple, repeated interventions are likely necessary. It also challenging to change behaviors when the costs or outcomes of a decision are removed from the point at which it is made.

In general, much more is known about promising interventions than about ways to translate, adapt, and implement them in varied contexts and at a broad scale. Many individual studies of interventions have been carried out across the six domains, but there has been far less work to follow up promising results with replication studies and with rigorous research on implementation and scaling. Implementation and scaling studies are a crucial next step for identifying the intervention strategies that successfully scale and the contextual, institutional, or policy factors that predict successful implementation.

A key takeaway from this review of the impact of behavioral economics on policy is that real policy impact will happen only when interventions that show effectiveness in a laboratory setting are translated for real-world application, carefully designed for the intended context, accepted by policy makers, and implemented at scale.

CONCLUSIONS

This body of work provides strong evidence that complex cognitive, social, behavioral, and contextual factors influence judgment and decision making. Behavioral economics has produced invaluable evidence about why people act in seemingly irrational ways, how they respond to interventions, and how public policy and

practice interventions can be designed to modify the habitual and unconscious ways that people act and make decisions. When implementing behavioral economics principles in the design of interventions aimed at changing targeted behaviors, it is important to match the tool to the problem, contextual factors, and the target population.

The strong evidence that the five core principles play a significant role in human decisions means that the design of effective policies intended to influence decision making requires careful, expert attention to behavioral factors. To ensure policies are effective, it is critical to involve experts trained in behaviorally-based policy development in the design and application of behaviorally informed policies.

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FOR MORE INFORMATION

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