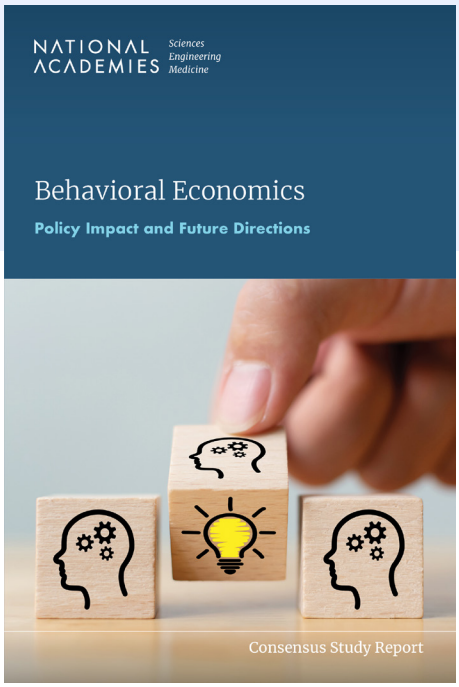
Behavioral Economics



Policy Impact and Future Directions

Behavioral economics has had a growing influence on public policy over the past several decades. The field is based in collaborations among economists and psychologists focused on integrating nuanced understanding of behavior into models of decision-making. Since the mid-20th century, this growing field has produced research in numerous domains and influenced policymaking, research, and marketing. The Sloan Foundation and the National Institutes of Health (NIH)[1] requested that the National Academies of Sciences, Engineering, and Medicine assess the contributions of the behavioral economics to public policy. 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 was charged to review evidence about the application of behavioral economics to key public policy objectives in a range of domains and synthesize what has been learned from this body of work, to suggest guiding principles for future work and applications, and to offer directions for future research.

CORE PRINCIPLES OF BEHAVIORAL ECONOMICS

Foundational theoretical and experimental work that has integrated findings about cognitive and psychosocial processes with economic analysis shows that decision processes are dynamic, malleable, and context dependent. These features help to explain how and why people make decisions that seem to run counter to rational analysis,

[1] The study also received support from the National Academy of Sciences W.K. Kellogg Foundation Fund.

and to the predictions of traditional models. This work points to the importance of 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 five principles have direct application to the kinds of decision-making that behavioral economists study and the choices that policymakers hope to influence. They have been applied in the development of a large and growing array of tools based on the evidence about influences on behavior.

EVIDENCE FROM SIX POLICY DOMAINS

The committee explored the available research in six important policy domains in which the ideas of behavioral economics have been tested: health, retirement benefits, social safety net benefits, climate change, education, and criminal justice. The committee found that for some strategies, there is strong empirical evidence of effectiveness. For example, the use of default options to guide people to a desired choice—such as making employer-matched increased retirement savings the default option for employees—and the framing of the available options were found to be effective strategies.

For other strategies, such as interventions that appeal to social norms, the evidence is mixed or less robust. Behavioral interventions in the context of health have been the most thoroughly studied, among the six domains. In that domain, structural approaches to lowering barriers to medication adherence, incentives for increasing physical activity, and default or opt-out programs for increasing preventive care such as cancer screenings were among the best supported interventions.

The strongest effects were apparent where interventions have precisely targeted specific behavioral issues. The strongest results the committee observed across the six domains are for a very specific intervention: making retirement savings a default choice for employees. The evidence also supports the cumulative value of multiple small-scale, low-cost interventions. Interventions that operate on a broader scale, such as efforts to reduce the administrative burden associated with social service programs to better reach the neediest populations who can benefit from them, can also be effective when carefully targeted. The research demonstrating positive effects for behavioral economics interventions typically shows modest effect sizes. However, as is particularly evident in the work on climate change—a challenge of unmeasurable magnitude—the application of combinations of individually modest interventions can cumulatively bring important changes and benefits for relatively little cost.

CONCLUSIONS

The evidence from the testing of behavioral ideas across six domains establishes the importance of considering the five behavioral principles in designing interventions. Taken together, 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. These concepts are indispensable for advancing scientific understanding of policy-relevant human behavior and for the design of public policies.

The field of behavioral economics has made significant advances over the past 20 years, producing evidence about both general principles and specific intervention approaches that address policy challenges in many domains. However, the field has not yet produced generalizable and implementable practice guidance and intervention design strategies for determining what works, when, and for whom. It is challenging to apply evidence beyond the scale and setting of a focused research study. Far fewer studies have followed up promising results with

replication studies and there is no guarantee that an intervention will perform as expected when implemented on a broad scale, whether in the public or private sector.

RECOMMENDATIONS TO ADVANCE THE FIELD

The process of translating research findings to effective, broad-scale, real-world applications is complex and, ideally, involves an interactive feedback loop that links theory, experimentation, design, evaluation, and implementation. Two ways to strengthen policymakers' and practitioners' capacity to implement evidence-based interventions are to:

- encourage collaboration among those trained in behavioral economics and those trained in implementation science or public management to develop understanding of the application of behavioral ideas to policy, and
- improve training in behavioral economics and public administration to better prepare policymakers to collaborate in translating research ideas for real-world policy development and design.

Research that can build effectively on the accomplishments of the field would include:

- basic research in intervention design, interdisciplinary investigation, and development of methods;
- research to support applications of behavioral economics concepts in practice, including implementation and scale-up and evaluation; and
- research to explore and support the positive contributions of behavioral economics to society, including attention to equity of impact and attitudes about behavioral interventions.

Specifically, research is needed to:

- advance behavioral design and intervention design methods to better link behavioral principles and insights to specific intervention and policy goals;
- advance methods for conducting pilot and rapid-cycle studies;
- accumulate more evidence on how findings from one setting can be applied to other settings or at broader scales;
- realize the potential for artificial intelligence and machine learning approaches to improve tailoring and targeting;
- bring cutting-edge adaptive trial design approaches to behavioral economics studies; and
- incorporate empirical methods from other disciplines and fields that can enrich behavioral economics research.

It will also be important for researchers, funders of research, and entities that support or sponsor behavioral units in organizations to continue to monitor the role of behavioral economics in society. In particular, they should focus on the equity implications of behavioral economics policies and interventions; the implications of public attitudes towards the ethics of behavioral economics research and practice, as well as their acceptance by the general public; and possible public policy interest in commercial applications of behavioral economics findings.

The benefits that behaviorally-based approaches can bring are clear, regardless of whether they are viewed as primarily the province of economics, behavioral science, or a hybrid of the two. Future application of these ideas, however they are categorized, may reach beyond the context of the individual behaviors, to help explain what appear to be people's nonrational responses. For complex regulatory structures, for example, there may be behavioral solutions to challenges that are not primarily the result of individual behavioral biases. Behavioral economists can consider not only a broad range of solutions to behavioral biases, but also how to apply behavioral solutions even when there is no clear problem of cognitive bias. It is likely that ideas not explicitly identified as coming from behavioral economics research,

but that nevertheless take advantage of behavioral insights, have already influenced the development of policy. All of these are reasons to be optimistic about the future contributions of the field.

COMMITTEE ON FUTURE DIRECTIONS FOR APPLYING BEHAVIORAL ECONOMICS TO POLICY **ALISON M. BUTTENHEIM** (*Cochair*), Department of Family and Community Health, University of Pennsylvania; **ROBERT A. MOFFITT**[2] (*Cochair*), Department of Economics, Johns Hopkins University; **STEFANO DELLAVIGNA,** Department of Economics, University of California, Berkeley; **CATHERINE C. ECKEL,** Department of Economics, Texas A&M University; **ANGELA FONTES,** Fontes Research; **JOSHUA S. GRAFF ZIVIN,** Department of Economics, University of California, San Diego; **RACHEL E. KRANTON,**[2] Department of Economics, Duke University; **LEONARD M. LOPOO,** Public Administration and International Affairs Department, Syracuse University; **ELDAR SHAFIR,** Department of Psychology, Princeton University; **STACEY SINCLAIR,**[3] Department of Psychology, Princeton University; **JENNIFER S. TRUEBLOOD,** Department of Psychological and Brain Sciences, Indiana University Bloomington; **PETER A. UBEL,**[2,4] The Fuqua School of Business, Duke University; **KEVIN G. VOLPP,**[2,4] Perelman School of Medicine, University of Pennsylvania

STUDY STAFF **MOLLY CHECKSFIELD DORRIES,** Study Director, Program Officer (until September 2022); **ALEXANDRA S. BEATTY,** Study Director, Senior Program Officer (beginning September 2022); **TINA M. WINTERS,** Program Officer; **J. ASHTON RAY,** Senior Program Assistant

[2] Member, National Academy of Sciences.
[3] Resigned, May 2022.
[4] Member, National Academy of Medicine.

FOR MORE INFORMATION

The Report Highlights was prepared based on the Consensus Study Report *Behavioral Economics: Policy Impact and Future Directions* (2023). Copies of the Consensus Study Report are available from the National Academies Press at https://nap.nationalacademies.org/catalog/26874.

The study was sponsored by the Alfred P. Sloan Foundation and the National Institutes of Health. Any opinions, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect the views of any organization or agency that provided support for the project.

Division of Behavioral and Social Sciences and Education

NATIONAL ACADEMIES *Sciences Engineering Medicine*