

# Grand Challenge for NSF-SBE in the Next Decade

## Clinical Trials in Economics

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**Abstract.** The gold standard for scientific research is reproducible controlled experiments. In the last two or three decades economics has made much progress in implementing experiments in both the laboratory and in the field. I propose that the NSF should set up a program to fund field experiments/clinical trials in a variety of areas in economics. These clinical trials should be designed to resolve fundamental debates in economics. Proposals for experimental designs should be submitted to a special program and be reviewed by referees and a panel of experts, as with current experiments. Unlike current proposals, we would expect some iteration with respect to the experimental design. When a consensus (or a significant majority) is reached about experimental design, funding would be offered to the researchers. It would be helpful to involve researchers from public health and other fields who are familiar with the problems involved with large clinical trials.

**Discussion.** I am well aware that the NSF has been funding field experiments in a variety of areas, including welfare payments, educational issues, and development economics, to name just a few. My proposal is to create a special program in experimental design and analysis for these and other topics. It would be particularly helpful for researchers to be on the alert for “natural experiments” and recruit subjects in both treatment and control groups to facilitate analysis of the experiments. (Think of rent-control as an example.)

I believe that there should be a bias towards policy-relevant experiments, but proposals for fundamental topics in human behavior should also be entertained. For example, over the last several decades economists have built up an impressive body of literature on game theory and strategic behavior, but there has been comparatively little empirical work, except in the relatively constrained environment of the laboratory.

There should also be educational funding for summer courses in experimental design and related topics to make sure that all economic graduates have some training in experimental design and analysis.

Long-running panels such as the PSID have been hugely helpful in understanding economic behavior at the individual and household level. My understanding is that interviews and surveys are still the basis for much of the analysis. I believe that monitoring technology available today can offer substantial improvement on these traditional methods by making the gathering of data less onerous and more accurate. This is a ripe area for analysis. Such monitoring technology would also be very helpful for the shorter clinical trials I am describing here.

A substantial amount of money is being invested by the private sector in the design and funding of panels for purposes of marketing. In the marketing literature, these are referred to as [single-source panels](#). Many of these are quite sophisticated and there is a strong possibility for public-private research co-operation in this area. In many cases, the panel members can receive different experimental treatments using quite sophisticated techniques. The data from such studies could be hugely valuable to economists studying household behavior.

For example, [Nielsen Homescan](#) maintains a standing panel of consumers who scan every item purchased on a weekly basis. This provides a wealth of data for marketing, but imagine what you could do by examining how purchases respond to changes in employment, family composition, taxes, consumer confidence, and the like. The marketing uses of the data require current data, but many of the other economic uses can be conducted with historical data, providing a natural way of addressing scientific and commercial needs. This is only a single example; there are several other single-source panels that are providing on-going data for various commercial purchases. With only a small amount of effort, these panels could provide highly useful scientific data. Conversely, one might speculate that existing efforts such as the PSID would provide commercially useful data as well (on a non-proprietary, non-exclusive basis, of course).

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