PROPOSAL: BEHAVIORAL ECONOMICS AND THE ENVIRONMENT: THE CASE OF ENERGY-EFFICIENT APPLIANCES

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This project explores a long-standing puzzle in the environmental economics literature: Why do people consistently buy energy-*in*efficient appliances, when they would save money in the long run by paying a little more up front for products that use less energy? An answer to this puzzle would help shed light on consumer behavior, and would have important implications for government policies aimed at reducing energy consumption.

One possible explanation is that people discount the future savings from energy efficiency; but the discount rates required to rationalize purchasing data are extremely high (20% or more), casting doubt on that explanation. Another possibility is that consumers are simply unaware of the cost savings. A third (and novel) explanation is that consumers systematically underestimate their future use of appliances and hence the cost savings from energy efficiency. Imagine that you are buying an air conditioner. You might think: Well, I will really only need the air conditioner for the two or three weeks of summer when the temperature rises above 90 degrees. So I won't be using it enough to justify the extra expense for a more energy efficient model. But after you have installed the air conditioner, you may find yourself running it most days.

This 'behavioral' story can be empirically distinguished from the other two explanations given above. First, information (in the form of energy labels) should not change people's behavior. That allows us to distinguish it from the second explanation given above. On the other hand, we should expect to see learning over time suggesting a way to distinguish the behavioral hypothesis from the high-discount-rate hypothesis.

This project is still in its infancy. The RA will focus on the following tasks:

- conducting a literature review of the relevant strands of literature in environmental economics and behavioral economics;
- collecting and organizing a large dataset from a variety of published and unpublished sources; and
- performing basic analysis of the data (summary statistics, simple regressions, etc.).

Good writing skills are important. Basic knowledge of behavioral and/or environmental economics is ideal but not necessary. Familiarity with STATA is a plus.