

Using Behavioral and Design Science to Reduce Administrative Burdens: Evidence from Public Housing

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Background and Objectives

This research seeks to use the behavioral and design science literatures to design and study interventions to reduce late payments and evictions for residents in public housing.

While both of these sciences draw heavily from the writings of Herbert Simon (1947, 1968), they have drifted toward different disciplines, picking up the assumptions and methods of their adopted fields. This drift is unfortunate. Behavioral science offers a keen understanding of human behavior, and design offers pragmatic tools to identify system bottlenecks and create the conditions for organizations to learn and change. A design approach may also counter a common criticism that the expert-driven, positivist-informed behavioral sciences fail to understand the actual heuristics used by individuals and the criterion by which they judge success.

Relevant Behavioral Concepts

By design, the public housing population is vulnerable, with high rates of seniors, individuals with disabilities, refugees, and non-English speaking populations. For our target population, 80 percent of residents are elderly, disabled, or both, and half live on incomes of less than \$10,000 annually. Recent scholarship shows individuals under these conditions are “less likely to weigh long-term consequences and exhibit forward-looking behaviors when threatened, challenged, and depleted” (Mullainathan & Shafir, 2013). In our qualitative work, I similarly found residents that received late payment notices expressed a present bias in seeking help. In public housing, this delay can be devastating—residents can move from up-to-date on rent to homeless in a little more than 60 days. These experiments seek to combat scarcity and present bias by raising the salience of action and reducing procedural frictions. I also employ language that looks to return the locus of control to residents.

Research Questions

This research seeks to remedy cognitive biases experienced by public housing residents, and also make theoretical and methodological contributions to behavioral science and public administration (Grimmelikhuijsen, Jilke, Olsen, & Tummers, 2017).

In that, I will seek to answer: 1) What features of public housing contributed to the a) current choice architecture and b) resident cognitive biases that are associated with negative housing outcomes? 2) How do modifications to the choice architecture emerge and evolve over time through the application of a design-based approach? 3) What impact did the design-based intervention(s) have on eviction actions in public housing? 4) What does combining the tools of behavioral and design science add to our understanding of reducing the administrative burdens?

Hypotheses

I expect that behaviorally informed interventions will reduce late payments and eviction actions relative to the control condition. Through the inductive work, I anticipate improving our understanding of how design-based science can improve the quality of behaviorally informed interventions.

Sample

This was a convergent mixed-method design in partnership with a public housing agency in a mid-size Midwestern city. For the experimental design portion, the target of the intervention is 6,500 households in publicly owned buildings. For an automatic withdrawal nudge, I randomized at the building level (10,500 individuals across 46 clusters). For a late-payment reminder nudge, I will randomly send a notice to late payers over the course of three months (estimated $n = 2,500$).

Methods

I will explore these ideas through a mixed-method study of public housing. By using multiple methods, researchers can better converge on the existing conditions and latent needs of residents (Greene & Benjamin, 2001; Timans, Wouters, & Heilbron, 2019) and “[enhance] our beliefs that the results are valid and not a methodological artifact” (Bouchard Jr, 1976, p. 278; Creswell, 2012). I will use quantitative and qualitative approaches to explore existing organizational choice architecture and residents’ cognitive shortcuts that may be causing undesirable outcomes (Bason, 2017). I will then turn to the behavioral literature to identify actions and bring these ideas to system participants to refine. Finally, using administrative data, I will experimentally test the impact on late payment and evictions actions. Both experiments were pre-registered on the Open Science Framework.

Practice and Policy Implications

At a basic level, the partnership with public housing intends to make a positive impact on the wellbeing of residents. Through the process, I will also see how a design-based approach can help researchers and practitioners better identify and change the extant choice architecture and resident’s cognitive shortcuts that may be causing undesirable outcomes. Integrating these literatures in the context of administrative burdens (Herd & Moynihan, 2018) and “sludge” (Thaler, 2018) opens fertile theoretical and methodological ground to improve the effectiveness of public interventions.

References

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