Choosing Who Chooses: Selection-Driven Targeting in Energy Rebate Programs

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We develop an optimal policy assignment rule that integrates two distinctive approaches commonly used in economics—targeting by observables and targeting through self-selection. Our method can be used with experimental or quasi-experimental data to identify who should be treated, be untreated, and selfselect to achieve a policymaker's objective. Applying this method to a randomized controlled trial on a residential energy rebate program, we find that targeting that optimally exploits both observable data and self-selection outperforms conventional targeting for a utilitarian welfare function as well as welfare functions that balance the equity-efficiency trade-off. We highlight that the Local Average Treatment Effect (LATE) framework (Imbens and Angrist, 1994) can be used to investigate the mechanism behind
our approach. By estimating several key LATEs based on the random variation created by our experiment, we demonstrate how our method allows policymakers to identify whose self-selection would be valuable and harmful to social welfare.

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