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Adverse Selection in Environmental Markets

This paper evaluates conservation and ecosystem services programs by examining methods commonly used in the U.S. to select parcels included in these programs. Our theoretical analysis implies that these methods are unlikely to be cost effective because the information asymmetry between private sellers and the ecosystem services buyer introduces adverse selection when buyer budgets are limited. Experiments test the theory and examine the extent of adverse selection in conservation markets. The results show that adverse selection is likely to exist in conservation markets. A discriminative auction experiment achieved just 89.3% of total social surplus. Screening contracts improved cost effectiveness and achieved 92.8-95.7% of total social surplus. However, the auction and screening mechanisms involve large transfers and are the source of a costly information asymmetry. A simple externality-correcting tax avoids the informational asymmetry. The experiments show that such a tax can achieve more cost effectiveness (99.5% of social efficiency) with lower transfers. This final result is important as recent trends in environmental policy are focused on expanding fiscally costly auctions rather than taxes.