

## Extended Abstract

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<b>Paper/Poster Title</b>	Using Choice Framing to Improve the Design of Agricultural Subsidy Schemes
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<b>Abstract</b>	<i>200 words max</i>
<p>Existing agri-environmental schemes have often suffered from poor uptake. We leverage insights from behavioral economics, in particular mental accounting and loss aversion, to test if we can encourage greater participation in environmental initiatives. Using a randomised survey experiment on UK farmers, we find that framing the same policy options in different ways can lead to significant shifts in farmer behaviors. In particular, our findings highlight the following considerations for the design of future policies: (1) whether the application costs are integrated into or segregated from a subsidy is important, (2), the labeling of agricultural schemes may affect expenditure allocation, and (3) reference points can affect the evaluation of new scheme alternatives.</p>	
<b>Keywords</b>	Prospect theory, nudging, environmental behaviors, farmers
<b>JEL Code</b>	Q18
<b>Introduction</b>	<i>100 – 250 words</i>
<p>We leveraged ideas stemming from mental accounting and loss aversion (Thaler 1985; Tversky and Kahneman 1991) to experimentally test three hypothetical policy modifications that we argue can be used to improve the design of agri-environmental schemes (AESs). Our randomized survey experiment generated three main results regarding the framing of agricultural policy that may improve the success of any new schemes that may be devised in the future. First, farmers are willing to exchange a larger amount of money for reduced application time when it is framed as a reduction in the initial subsidy offered rather than when it is framed as a standard subsidy combined with a separate cost that a farmer must pay. Second, how AESs are named can change how a subsidy payment is allocated across expenditure categories. Specifically, we found that using an environmentally oriented name for a financial incentive scheme may encourage farmers to spend additional income on environmental initiatives, even if no restrictions are placed on expenditure. Finally, changing the framing of an existing scheme can affect the preference relationship between new scheme alternatives. In practice, this means that new schemes should be designed carefully to avoid features that compare unfavorably with existing schemes, because this may adversely affect their attractiveness even if the new scheme provides other benefits. Although the United Kingdom is our case study, our findings illustrate the importance of leveraging insights from behavioral economic theories for agricultural policy redesign more generally</p>	



<b>Methodology</b>	<i>100 – 250 words</i>
<p>A sample frame of farm addresses was formed using publicly available data on recipients of CAP subsidy payments in the United Kingdom between 1999 and 2013 from farmsubsidy.org. Invitation letters were mailed to 12,000 sampled addresses. Our survey randomised individuals into a control or experimental condition across three different experiments designed to see if we can leverage insights from behavioural economics, specifically mental accounting and prospect theory, as a low cost means for encouraging participation in agri-environmental initiatives.</p>	
<b>Results</b>	<i>100 – 250 words</i>
<p>First, when exchanging money for reduced application time, farmers are willing to sacrifice substantially more of their subsidy for a time reduction than they are willing to pay in a separate transaction. This suggests that one way of at least partly compensating farmers at least in terms of overall utility (as opposed to money) for reductions in future agricultural support is by integrating any application costs into the subsidy itself, rather than requiring farmers to incur the costs separately.</p> <p>Second, the label attached to a subsidy appears to affect how farmers would allocate expenditure from additional subsidy income. This result adds to the existing evidence against the fungibility of money. Therefore, a simple and cost-effective nudge to promote more sustainable or environmentally beneficial behaviors would be to rename any basic holding subsidy to include a label that promotes the kinds of expenditure it would be welfare-increasing to encourage</p> <p>Third, our findings suggest that the relative desirability of any new scheme will depend not only on the characteristics of those new schemes but also on the characteristics of any existing scheme a farmer is currently participating in. For example, loss aversion may lead farmers to undervalue a new replacement scheme if it contains some features considered to be directly inferior to features of the existing scheme, even if the new scheme offers additional benefits.</p>	
<b>Discussion and Conclusion</b>	<i>100 – 250 words</i>
<p>We conducted an online randomized survey experiment on a sample of U.K. farmers to show how two insights from behavioral economics—mental accounting and loss aversion—can inform the design of new agricultural policy schemes to improve uptake (and perhaps effectiveness). Our results show that relatively small changes in the way a policy is framed can potentially have a substantive impact on behavior. These changes have negligible costs compared with the potential benefits they could have. Improving policy design by taking behavioral aspects of choice into account may serve to increase adoption and adherence, encouraging behaviors that boost social welfare. Importantly, better-designed policies could improve the welfare of farmers themselves.</p>	