2013

Empathy Nudging Increases Conservation of Farming Land

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One of the major challenges of public policies on non-point source pollution is steering the polluters towards more environmentally conscious behavior. This is usually done by providing monetary incentives for implementing technologies that protect the environment. Conservation compliance on farming land is an example. In order to be eligible for certain subsidies and direct payments, agricultural producers participate in conservation compliance on highly erodible lands and wetlands. This approach can be costly for the public both in terms of actual subsidy payments and enforcement/monitoring. Current discussions center on requiring (or not) conservation compliance in order to be eligible for the highly valued (by farmers) crop insurance subsidies.

One alternative to the current financial incentives-only approach is to engage the public in appealing to the farmer's empathy and nudging them to "walk in the shoes" of those who are adversely affected by the pollution. Current public policy, programs and education on conservation assumes that individuals are interested solely in profit maximization.

CAFIO-PRG Research

We are investigating if shifting the focus toward also considering the human dimension as it pertains to shared interests, with a specific emphasis on joining in the shared cause of enhanced water quality, might result in a change in behavior at a lower cost. This could contribute to achieving a more desirable level of water quality more efficiently.

We frame the downstream water pollution problem as one in which an upstream farmer (UF) chooses the level of conservation on his land. A low level of conservation results in greater chemical runoff and soil erosion and more costly clean-up for the downstream water user (DWU). A high level of conservation is more costly, in both actual dollar outlays and in the more subtle "psychological costs" of farming this way (e.g. perhaps having to bear more uncertainty of planting dates due to having more plant material on the fields in the spring) for the UF, but it enhances environmental quality, and protects the revenues and/or reduces the costs of the DWU.

We designed and conducted an economic experiment (500 participants, 50% females, majority are students; $43.6 average earnings) that simulates this situation. We considered the difference between conservation levels under non-incentivized and incentivized conservation regimes and the coupling of these regimes with DWU nudging UF for empathy, i.e. to consider the effect of their decisions on the wellbeing of DWU, and perhaps as a result joining in the shared cause for higher water quality downstream.

CAFIO-PRG Findings

The CAFIO-PRG research shows that:

- Empathy nudging increases conservation by more than 25% if it is coupled with monetary incentives. There appears to be a "synergy" as the shared interest in enhanced water quality develops. This means that including interaction between the DWUs and the UFs in existing programs on conservation compliance holds the potential to increase the effectiveness of such programs, although further research is needed on the costs involved in various ways of nudging for new choices.
- Combination of empathy nudging and monetary incentives increases the level of payoff sharing between the UFs and the DWUs. The proportion of UFs who share increases from 64% to 78%. UFs are more likely, in effect, to share the costs of cleaning water pollution with the DWUs by decreasing the levels of such pollution in the first place.
- Over 85% of DWUs believe that their nudging for empathy matters. The main reasons for nudging are encouraging UFs to (a) choose conservation level which will yield similar profit for both parties and (b) consider joining the shared cause for better water quality. Hence the communication between the DWUs and the UFs should not be overlooked, and must be considered as one of the elements of programs encouraging conservation compliance. This will potentially lead to cost savings for such programs.

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