Preference heterogeneity, asymmetric information, and the inevitability of informational rents in environmental subsidy programs

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Abstract:

We analyze the design of an environmental policy program in which agents are compensated for the amount of environmental services they provide. We assume that agents differ only in the rate at which they discount the future. Time preference heterogeneity implies that agents value specific environmental policies differently for two reasons. First, differences in discount rates imply that agents differ in how they value a particular stream of per-period benefits and costs. Second, decisions like how much to invest in abatement technologies or in land quality are influenced by time preferences, and differences in specific abatement technologies or land qualities can make environmental protection more or less costly -- and hence the stream of per-period benefits and costs may differ between agents too. Contrary to conventional wisdom, we show that the complete information menu of environmental policy contracts can be incentive compatible in the presence of information asymmetries, and we determine the circumstances under which this is the case when investments are sunk at the time the government initiates the environmental policy program, and also when they can be adjusted.