论文

参与人不同风险偏好的拍卖在生态补偿中的应用——以肃南县退牧还草为例

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Bidders' different risk attitudes in auction of payment for environmental services —— A case study of Sunan County

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摘要 生态补偿是解决环境问题的有效方式, 而确定补偿标准是其中最重要的指标之一, 也是保证项目能长久有效实施的关键. 拍卖方式能平衡生态系统服务提供者和支付者之间的成本效益, 考虑自愿和公平的原则, 是确定补偿标准的较好方法. 通过构建不同风险偏好的拍卖投标者的最优报价模型, 结合肃南县退牧还草生态补偿项目, 分析了对保留价不同的预估范围下当地104户牧民的风险偏好和风险溢价差值. 结果表明: 当风险溢价差值为零、大于零以及小于零时, 投标者分别为风险中性、风险厌恶和风险喜好的类型; 肃南县参与此次拍卖竞标的牧民随着机会成本的增加, 风险偏好从厌恶, 到趋于中性, 最后表现为风险喜好, 其中当机会成本增加到一定额度时, 风险偏好又从风险喜好反弹回风险厌恶再回到风险喜好; 而随着对预估保留价不确定性程度增加, 风险溢价差值表现为逐渐增大的趋势. 另外, 实证结果还表明, 对于风险中性的投标者应公开保留价, 而对风险厌恶者则应保密.

关键词： 拍卖   风险偏好   生态补偿   风险溢价   肃南县

Abstract： Payments for environmental services (PES) is an effective way to resolve the environmental problems. And one of key issues is the compensation standard (conservation payment) for the environmental services (ES) offers, and this can make sure the PES program be implemented as long as possibly. Auctions can consider the cost-benefits between the landowners and the ES buyers at the same time. However, the benchmark auction model is based on the basic assumptions, one of which is that the bidders are risk-neutral. In fact, farmers are generally considered to be risk-averse. The reason behind this is that the conservation payment, as a nonstochastic income component, decreases farmers' income uncertainty, which induces them to marginally lower their bids (as compared to the risk-neutral bidder) to increase the probability of acceptance. Of course, occasionally, they are possible to be risk-appetite. A model of optimal bidding for conservation contracts was developed and applied to a conservation program abroad. To use this optimal bidding model and consider the different risk attitudes, we analyzed the risk attitudes and risk premiums in different uncertainties of the reserve price of 104 informants in Sunan County China. The results show that when the different risk premiums is 0, or more than 0, or less than 0, the bidder is risk-neutral, risk-adverse, or risk-appetite, separately. In this investigation, as the opportunity cost grows, the risk attitudes of the bidders are from risk-adverse, to risk-neutral, and to risk-appetite at last. When the opportunity costs are more that some value, the risk attitudes are bound to risk-adverse from risk-appetite. As the extent of uncertainty grows, the different risk premium becomes more and more. Moreover, when the bidders are risk-neutral, to open the reserve price is an efficient mechanism; and when they are risk-adverse, it's best not to do that.

Key words: auctions   risk attitude   PES   risk premium   Sunan

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