Incentives, Framing, and Trust in AI: An experimental study

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We examine how compensation contract design and algorithm framing influence decision makers' performance and reliance on algorithmic advice in a price estimation task. Previous experimental studies (Arkes et al., 1986; Ashton, 1990) observed the paradoxical phenomenon that financial incentives undermine potentially positive effects of algorithm use, as they seem to encourage decision-makers to exert unproductive effort rather than relying on the algorithm. Based on a large sample of almost 1,500 participants, we find that compared to a fixed compensation, financial incentives consistently lead to more (and not less) reliance on algorithmic advice, to an increase in invested effort, and to an increase in performance both with and without algorithmic advice. These effects of incentives are similar when employing tournament vs. performance-based incentives. We further find that framing the algorithm description as also incorporating human-expert judgment has positive effects on acceptance of the algorithm. These findings have direct implications for the employment of algorithmic advice and decision tools in managerial practice.