

## Haze and Decision Making: A Natural Laboratory Experiment

### Abstract

The adverse impact of haze on health and related economic outcomes has been extensively documented in the literature. This paper is a first attempt at investigating the effect of haze directly on decision making in a natural laboratory experiment over five days with highly varying levels of Particulate Matters 2.5 (PM<sub>2.5</sub>) in Beijing during October 2012 before PM<sub>2.5</sub> became more commonly used in China the next year. An increase in the level of haze yields an increase in risk aversion and ambiguity aversion when facing gain oriented uncertainty, but a decrease in aversion to risk involving losses. Subjects are more impatient when discounting in a remote time horizon, but not for tradeoffs over the near term. For other-regarding behavior, increased haze gives rise to more selfishness, greater sense of fairness, and less cooperativeness. In strategic thinking, increased haze leads to more deviations from what may be considered optimal in the second-price sealed bid auction and the p-Beauty game. These results are robust with respect to varying the time window over which we average the level of haze and provide a preferential foundation for several findings linking haze to real world economic phenomena including stock market, human capital, and crime.

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