

# Loss aversion and the welfare ranking of policy interventions\*

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## Abstract

In this paper we develop theoretical criteria and econometric methods to rank policy interventions in terms of welfare when individuals are loss-averse. Our new criterion for “loss aversion-sensitive dominance” defines a weak partial ordering of the distributions of policy-induced gains and losses. It applies to the class of welfare functions which model individual preferences with non-decreasing and loss-averse attitudes towards changes in outcomes. We also develop new statistical methods to test loss aversion-sensitive dominance in practice, using nonparametric plug-in estimates. We establish the limiting distributions of uniform test statistics by showing that they are directionally differentiable. This implies that inference can be conducted by a special resampling procedure. Since point-identification of the distribution of policy-induced gains and losses may require very strong assumptions, we extend comparison criteria, test statistics, and resampling procedures to the partially-identified case. Finally, we illustrate our methods with an empirical application to the welfare comparison of alternative income support programs in the US.

**Keywords:** Welfare, Loss Aversion, Policy Evaluation, Stochastic Ordering, Directional Differentiability

**JEL codes:** C12, C14, I30

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