Welfare Effects of Information Acquisition Costs

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Abstract

Do reduced information costs always result in higher welfare in a strategic environment? We study this question using a model of costly information acquisition in Bayesian games with symmetric quadratic payoff functions and normally distributed private signals. The main result of this paper is a necessary and sufficient condition that a decrease in the price of information be beneficial to welfare. We represent welfare as an affine function of the variance of a common term in an equilibrium action and that of an idiosyncratic term. A decrease in the price of precision is always beneficial to welfare if and only if the coefficient of the idiosyncratic variance is greater than a positive constant and less than another value which is affine and increasing in the common variance. A Bertrand game, a beauty contest game, and a public goods game do not satisfy this condition.

JEL classification: C72, D82.

Keywords: Bayesian game, incomplete information, information acquisition, private signal.