

SOCIAL GAINS FROM HIDDEN MANIPULATION OF NOISY QUALITY SIGNALS

ARMIN RICK

University of Chicago

ABSTRACT:

How does manipulation of noisy quality signals affect welfare? How do the welfare implications depend on the transparency of manipulation activities? I investigate these questions in the context of a competitive labor market in which firms observe a noisy signal of a worker's skill level and assign workers to jobs with different skill intensities. Workers perfectly observe their skill level and can engage in costly manipulation activities that affect the distribution of their signal. If firms can perfectly observe the extent of individual signal manipulation, manipulation can be used as a classical signaling action, which can lead to costly signaling 'rat races' that make all agents worse off. All else equal, such rat races can be avoided if firms can only observe the noisy skill signal but not the extent of signal manipulation. Moreover, giving workers access to a hidden signal manipulation technology can lead to a Pareto improvement over a ban on manipulation activities under the same conditions for which observable manipulation makes all types of agents worse off. Roughly speaking, this can occur because in response to modest signal manipulation efforts by highly skilled workers, wages for higher signals can increase a lot more than wages for lower signals fall. This can result in higher expected wages for all types of workers, even if a given type chooses not to manipulate.