

# Signaling, Free-riding and Market Discipline

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## Abstract

In the standard signaling model of Spence [Q. J. Econ. 87 (1973) 355] a single agent decides whether to send a costly signal to influence a receiver's beliefs about her type. Spence described his paradigm case in terms of applicants in a job market but the model is also applicable to firms wishing to advertising product quality in a world of wide consumer choice. The frequent introduction of new versions of products adds uncertainty as to quality to the consumer's everyday purchasing decisions.

We consider a model in which firms are marketing products that are not competing with each other, but whose qualities are nevertheless correlated. If the signaling mechanism is imperfect, so that uncertainty remains about product quality even in the absence of a positive signal, then difficulty arises in maintaining signaling in the presence of the incentive to free-ride off other's signaling efforts.

Our paper illustrates the interplay between three forces: the firm's desire to clearly reveal their product's quality when it is good, their incentive to free-ride, and the market's expectation about whether firms make an effort to advertise quality when their products are high quality. With our model, we found that improvements in signaling technology may lead to less signaling in the market; this was due to a stronger free-riding incentive leading to the breakdown of the "signaling" equilibrium, by which we mean the equilibrium in which all firms follow the pure strategy of always making an effort to signal when their product is high quality. However, when signaling technology is very good market expectations dominate, no matter how correlated one firm's product quality is with another's.