

**The detecting and pricing strategies in the software
industry: when should close one eye?
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This paper shows that the selective behavior in detecting piracy is rational for a monopoly software producer in a two-period model and shows the existence of market failure. First, each consumer in the economy has three options: buy the software, pirate the software, or not use any software depends on consumer's net utility. The authorized software package includes the software and supporting-service, these two components are valued differently by heterogeneous consumers. If a consumer piracies the software, he/she will not have to pay the price but will only get the software (without the supporting-service) and could be charged a fine if being detected. On the other hand, the monopolist would choose its detecting strategy in each period and set the corresponding price and penalty to maximize its profit. We show that the firm would gain higher profit if not detecting in the first period (close one eye). We also show that from the social planner's point of view, the best detecting and pricing strategies of the monopolist are not always social optimal. Under some conditions of the level of the detecting cost and the network externality, there exists market failure.