

Modeling Software Piracy Protection: Monopoly versus Duopoly

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Abstract

The economic analyses of software piracy typically rely on the simplifying assumption that the product is offered by a single producer. We argue that a realistic description of the software market and associated economic aspects of software piracy might be also captured by studying competition between software developers. Using an illegal version of software violates intellectual property rights (IPR) and, due to public protection (such as copyrights), is punishable when discovered. If a developer nonetheless considers the level of piracy to be high, he may introduce his own private protection. The focus of our analysis is on the interaction between public and private IPR protection in the two market structures under considerations. We show that, unlike in cases of monopolies, there is no conflict of interest between the regulator and producers in duopoly setup. Moreover, unlike in a monopoly, the optimal public IPR protection in duopoly does not affect the developers' choice of software quality.

Keywords: Software piracy, private and public IPR protection, quality and competition effects, vertically differentiated duopoly

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