Private and Public IPR Protection in a Vertically Differentiated Software Duopoly

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Abstract

We study the interaction between public and private intellectual property rights (IPR) protection in a duopoly in which software developers offer a product variety of differing quality and compete for heterogeneous users, who have an option to buy a legal version, possibly use an illegal copy, or not buy a product at all. Illegal usage implies violation of IPR and is punishable. A developer may use private IPR protection for his software if the level of piracy is high. An important intermediate step in our analysis addresses firms' pricing strategies and the analysis of the impact of both private and public IPR protection on these strategies (with monopoly serving as a benchmark case). Last but not least, we make some comparisons with an analogous model based on horizontal product differentiation.

Keywords: Vertically differentiated duopoly; Software Piracy; Bertrand competition; Copyright protection; Private and public intellectual property rights protection

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