Efficiency-enhancing taxation and nonlinear pricing

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Abstract

This paper considers commodity taxation in presence of a monopolist that prices access to and usage of a good/service (e.g., with a two-part tariff). We examine how underprovision can be corrected by (ad-valorem) taxation, allowing for differentiated tax rates on usage and access. In a simple model with identical consumers, we show that if the marginal cost is small, the usage fee decreases with the respective tax rate, and consumption increases. Hence, despite underprovision, the optimal ad-valorem tax rate on usage is positive. With heterogeneous consumers, and the monopolist engaging in second-degree price discrimination, we show that a tax targeting usage is optimal when the marginal cost or the information rent left to the high types are small. By contrast, when the marginal cost or the information rent are large, a tax targeting access is optimal. Applications of our model include mobile and fixed telephony, Internet access,energy distribution and transportation.

Keywords: theory

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