

A Competition Between Land and Mobile Networks: Price Discrimination and Access Charge Negotiation

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Abstract

This paper models and analyzes the competition between land and mobile networks in telecommunication service market. Each network charges different prices for calls terminating on its subscriber network(on-net calls) and those terminating on a rival's network(off-net calls). Consumers are segmented on the mobility attribute and two networks are located at the two extremities of the mobility segments. Developing an economic game model, we investigate the effect of price discrimination and access charge negotiation on the existence and stability of competitive equilibrium.

By examining two network's competitive interaction with service prices and access charges, we first show that a competitive equilibrium may fail to exist for large access charges. Indeed, raising each other's cost through high access charges need not raise industry prices and profitability, because it leads to more intense competition for market share and results in lowering prices. Second, we show that price discrimination lower the average price under linear pricing. Moreover it follows that equilibrium profits are lower under discriminatory pricing than under uniform pricing. In the consequence, we conclude that reciprocal access charge intensifies network competition and price discrimination increases social welfare.

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