

Abstract

Estimating the Demand for VoIP Services

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The potential impact of Voice over Internet Protocol (VoIP) services on traditional telephony is the focus of much speculation and judgmental forecasting. The provision of VoIP services by large cable systems is seen as a direct threat to incumbent local exchange providers. The recent announcements that AT&T and Qwest will be offering VoIP services attest to the heightened level of interest in VoIP.

There are few, if any, background empirical models of the demand for these services. In this paper, a model of the potential demand for VoIP services is approached in terms of a sequential decision framework in which a household's first decision is associated with acquisition of high-speed Internet access and then a second decision is made with respect to the adoption of VoIP services. The decisions are treated as sequential rather than joint because high-speed access, while necessary for VoIP, may be demanded by a household for reasons other than VoIP. A sequential logit model is estimated using information obtained from a large omnibus survey of U.S. households. Data on a household's choice of Internet access, their 'willingness-to-pay' for high-speed access and their total spending for local and long-distance calling are available in the survey, as is information on typical household socio-economic demographics such as age, education, and income.

Alternative forecast scenarios of VoIP services are derived conditional on both expected broadband penetration rates and expected price of VoIP services relative to household spending on local and long distance services.

Keywords: Voice over Internet Protocol (VoIP), willingness-to-pay, demand, telephony demand

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