

Real options' impact on mobile termination costs

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Abstract

This paper proposes a real options model for valuing the option to delay mobile telecommunications network investment decisions and a method for calculating the real options' impact on mobile service costs. Ranges of option value multiples are calculated for the decisions to invest in a number of network elements, each representing a different part of the mobile network, subject to different demand and technological uncertainties. The value of the option to invest in each network element, net of future replacement options, is modeled as a function of the element's total variable profit and the cost of investment in the element. The model and method are then applied to estimate the real options' impact on mobile termination costs using real cost and volume data. Although it focuses on telecommunications, the model and method can be adapted for application to other network industries as well.