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Coping with Heterogeneity in Cross-National Comparisons of Prices for Communication Services

Rational regulation calls for periodic evaluation of its effects. A growing number of regulatory agencies, policy-making institutions, and intergovernmental organizations rely on some form of benchmarking. For example, the U.S. Federal Communications Commission is required to review the effects of its policies every two to four years, depending on the market segment. The European Union documents the evolution of important industry performance statistics in its Implementation Reports. Both the Organisation for Economic Co-operation and Development (OECD) and the International Telecommunication Union (ITU) publish data comparing the performance of telecommunication industries operating under different legal and regulatory regimes. This task is facilitated by a more systematic information base and increasingly powerful statistical software. Yet, such comparisons also have to overcome daunting conceptual and empirical challenges.

A key challenge in cross-national benchmarking is the design of meaningful performance indicators. Among the commonly used indicators are adoption rates, prices, quality of service measures, and investment data. There is growing awareness of the strengths and weaknesses of different choices but more needs to be done. One particularly testing problem afflicting cross-national comparisons of prices of communications services is the increasing importance of price differentiation for communications services, in particular the reliance on multi-part self-selection tariffs. Such pricing models were first widely introduced in mobile voice markets but are now spreading to other services, including traditional voice services, voice over Internet Protocol (VoIP), and cable television. With the increasing concern about high volume uses, it can be expected that similar pricing models will soon be used for Internet access services as well. This is a remarkable change as not so long ago many experts saw flat pricing as the successor model to per-minute or other volume-dependent charges. For international price comparisons, which have recently found more attention, multi-part self-selection tariffs raise difficult methodological issues over and above the well known problems of converting national currencies to a common denominator and comparing different pricing structures, such as flat and measured prices.

Among the strategies adopted to overcome these challenges are (1) reliance on aggregate measures (such as the average revenue per user); (2) the selection of a "representative" price or pricing plan; and (3) use of a basket of service components. While they have certain desirable features, these approaches nonetheless yield widely differing numbers and, perhaps even more disturbing, rankings of nations. It would be desirable to have a method for comparing multi-part price structures that is more robust to national particularities. We propose a new approach, the Lowest Expenditure Frontier (LEF) as a complement to the existing price indicators. The paper discusses the method and compares it with the existing approaches. It is then illustrated in a comparison of mobile voice and data prices in 10 selected OECD countries. LEF is particularly useful whenever national heterogeneity undermines the accuracy of the older methods. Used in conjunction with existing approaches, LEF should assist in developing better approaches to evaluate the relative performance of communications industries for management and policy purposes.