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Regulatory Economics in New Telecom Markets: US and European Perspectives

Blog Editor

As part of the [Fourth LSE Network Economy Forum](#), held on 25 March 2013, Johannes Bauer presented a keynote on regulatory economics in new telecom markets. This post addresses Johannes's key points on how the definition of telecom vs information services affects the competitive landscape in Europe and the US, and what necessary data needs to be gathered for an effective regulatory regime. The author outlines the extent to which regulatory theory and policy are in need of reorientation.

The differentiation of telecommunication and information services in the U.S. is a legacy of reform efforts, dating back to the 1960s, to delineate competitive from non-competitive market segments. Although this distinction raised numerous challenges and never resulted in a satisfactory analytical definition, it continues to be embedded in U.S. telecommunication law and practice in traditional voice markets. Because the FCC declared different broadband access markets as an information service beginning in 2001, the distinction is less pressing in advanced communication markets but it creates considerable challenges for firms operating on telephone and information markets. Telecommunications continues to be treated as common carrier service, subject to specific rights and obligations (e.g., to charge just and reasonable prices), although the FCC widely practices forbearance. Information services are subject to the FCC's ancillary jurisdiction based on Title I of the Communications Act of 1934.

There are a number of other distinctions that continue to affect U.S. telecommunication markets. The reforms of 1996 did not seek to eliminate the different legal treatment of broadcasting, cable TV, telephony, and information services. Rather, the Telecommunications Act of 1996 made the barriers between these market segments more porous, allowing companies to diversify into other activities (in some case subject to cumbersome regulatory safeguards). During the late 1990s and early 2000s, this approach was workable but as convergence intensified it became less tenable. Consequently, there is an emerging discussion on the basic principles and legal design of a communications policy framework for the future. Key elements of this discussion echo topics that were part of earlier reform debates in Europe and have become engrained in European communications law, such as technological neutrality and competitive neutrality.



Collection of relevant and useful data to assess the need for ex ante (or other forms of) regulation continues to be a challenge. The National Broadband Map is gradually filling some gaps at a level of high granularity but important weaknesses remain. Most apparent is the lack of good price data. This goes beyond problems of data collection as designing meaningful metrics for increasingly diverse service and bundling options is non-trivial. Another area where data is poor is innovation activities, both within the ICT sector and in sectors enabled by ICT infrastructure. However, the problem faced by regulators goes beyond data availability—the conditions for and form of regulatory intervention in the dynamic and interrelated ICT system are less well known than under traditional natural monopoly settings.

In the U.S. ICT infrastructure is financed largely by private investment but other funding options play a role. In the wake of the economic crisis of 2008, the American Reinvestment and Recovery Act (ARRA) of 2009 earmarked \$7.2 billion to provide grants and subsidies to service providers in non-served, under-served, and rural areas during a four-year window. Many states and communities have taken an active role in deploying advanced information infrastructure. Models range from direct public ownership to public-private partnership (often involving the provision of emergency services) to financial and in-kind subsidies (e.g., free access to rights of way). While there are cases of success and failure, the overall effectiveness of these programs has not been fully studied and it is difficult to assess what the impact of reduced funding on infrastructure investment is. The FCC is working on details of a universal service policy that would retain public subsidies for selected areas.

The need for theory and policy reorientation

These observations point to a deeper challenge: that regulatory theory and policy are in need of a reorientation. **First**, many of the principles upon which regulation are based are derived from static equilibrium economics. Even where policy-makers are professing attention to dynamic market evolution, such as in the setting of interconnection prices based on long-run incremental costs, the underlying model falls short of capturing the conditions of dynamic market evolution. Investment and innovation are inherently dis-equilibrium processes that are poorly approximated by the regulatory interventions.

Second, regulatory interventions are conceptualized as limited measures targeted to monopolistic market segments. This strategy was useful during the era when monopolistic elements prevailed in the industry but it is increasingly less appropriate in the present framework of highly interrelated, interdependent, and complementary market segments. In such an environment, public policy also needs to systematically assess and take into account indirect effects of limited regulatory interventions on the ICT system at large. We lack the systematic tools to do this and it is therefore rarely part of regulatory practice.

Third, regulatory theory largely ignored aspects of innovation. This was already pointed out by J. A. Schumpeter in the 1930s and 1940s but did not prevent building regulatory practice on an essentially static basis. This does not mean, of course, that innovation was not seen as important or that it did not take place. Rather, it was not part of the regulatory models used by decision-makers. This changed gradually during the liberalization of ICT but the innovation theory used was rather simple: more competition begets more innovation. To a large degree this turned out to be the case but as ICT matures we realize that innovation comes in many different shades and that not all are equally well supported by the same competitive processes. Attention to innovation reveals the need to maintain some degree of institutional diversity, as different institutional environments will support different innovation paths.

Fourth, much of regulatory economics assumes (tacitly or openly) that regulatory intervention is costless and motivated by goals of welfare maximization. The experience with unbundling policies shows clearly that regulatory intervention often cannot be executed as required by economic theory, resulting in significant costs and prolonged deviations from an optimal path. Regulatory economics would be well served if a stronger political economic approach were developed. This would shed different light on currently pending proposals suggesting fine-grained approaches, such as geographically differentiated regulation or dynamic access pricing.

Looking ahead

Some authors have started to explore alternatives drawing insights from a variety of theoretical bodies. These include the theory of socio-economics, complex adaptive systems theory, and reliance on computational modeling approaches (e.g., agent-based models). Although these frameworks are in many ways more appropriate for the current technological and economic environment of ICTs, they are not yet fully developed and have not been translated into specific regulatory actions. Important aspects of regulatory design pointed out by these approaches are symmetric forms of regulation, ex post rather than ex ante regulation, the importance of institutional diversity, and new dimensions of public policy dedicated to setting the broader ("constitutional") framework for advanced communications.

This article gives the views of the author, and not the position of LSE Network Economy Blog nor of the London School of Economics.

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