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Book review

Telecommunications regulatory handbook

Hank Intven (Ed.); McCarthy Tétrault, World Bank, 2001, pp. 350, \$65, ISBN 0-9697178-7-3[☆]

Ask any veteran from the trenches of the telecommunications regulatory wars of the past decade or so whether they could write a “how-to” memoir of the experience, and the answer would almost certainly be, “sorry, it can’t be done”. Those of us who have spent our careers wrestling with the complexities of market openings, tariff rebalancing, interconnection pricing, and universal service funding on an international stage, only to see the political, economic, and technological landscape change beneath our feet on a regular basis, are too hardened by the experience to believe that a single volume could capture the substance of all these issues in a useful and compelling manner. As it turns out, we would have been wrong.

The hardened veterans of McCarthy Tétrault, a leading Canadian telecommunications regulatory law firm, have undertaken the Herculean task of assembling, indeed in one volume (albeit some 330 pages), the collected wisdom of regulatory reformers and practitioners across the globe. The result is a “Telecommunications Regulatory Handbook” that actually lives up to the name. Principal editor Hank Intven—a lawyer with a considerable experience in telecoms, along with his legal colleagues, Jeremy Oliver and Edgardo Sepúlveda, guidance and support from *infoDev*, the ITU and the World Bank, plus a star-studded editorial committee, have produced one of the most significant publications of its kind for telecommunications officials, in both developing and developed countries: early editions have already been rapidly commandeered within some regulatory agencies!

One of the hardest tasks in approaching this subject in a comprehensive manner is simply to organize the many topics and issues in a coherent manner. The handbook consists of six principal chapters, or “modules” as they are termed: telecoms regulation overview, licensing, interconnection, price regulation competition policy and universal service. Of course, all of these subjects could merit several books of their own, and many of them have. The advantage of this handbook is that it presents a relatively complete picture of the breadth and inter-relationship of these topics, while not oversimplifying the review of each.

[☆] Copies are being distributed to regulatory officials by The World Bank, but may be ordered from McCarthy Tétrault (www.mccarthy.ca) by e-mailing cdemelo@mccarthy.ca. Modules from the handbook are also available electronically at: www.infodev.org/projects314regulationhandbook

1. Module 1—overview of telecommunications regulation

This section provides a useful introductory summary of the status of telecom regulation on a global scale, and the trends that have been unfolding during the past decade: the world witnessed the birth of some 84 new communications regulatory authorities since 1990. To anyone who has been involved in the field for a while, this background discussion—on regulatory objectives and principles, institutional structures, and international organizations—probably appears fairly simplistic. However, the target audience for this handbook is employees of those 84 new regulatory agencies, many of whom (including some at the highest levels) may well have begun their careers with little or no background knowledge of the industry.

Amongst the substantive issues tackled is the question of multi-sectoral regulators. Many nations are still grappling with questions of what services and industry segments should come under which regulatory authority. Distinctions include not only whether telecommunications should be combined with power or other public utilities, but elements of the convergent communications field, for example telecoms and broadcasting. This introduction considers some advantages and disadvantages of multi-sector regulators, although a more in-depth discussion of the topic, including some concrete examples of alternatives, would also have been welcome.

2. Module 2—licensing telecommunications services

This module moves quickly to highly practical information for novice regulators. The process of issuing new licenses, as the central component of market-oriented reforms, is typically among the first and highest profile responsibilities they must confront, and at the same time amongst the most complex and politically sensitive. The handbook takes a comprehensive approach to the range of options and tasks involved in establishing a licensing regime, following through with criteria involved when granting licenses, both to new market entrants, as well as to incumbent operators that may be newly privatized. It places particular emphasis upon European Union precedents, including the option for adopting general authorizations (sometimes known as “class” licenses), in place of individual licenses for specific types of services and carriers.

This chapter also covers the issue of spectrum assignment, and the options for granting limited radio frequency licenses among competing applicants. Already an especially challenging task for regulators, this area has become even more problematic in the context of recent and impending licenses for new UMTS and third generation mobile services. The handbook authors appear to favor spectrum auctions, as opposed to comparative evaluations—so-called “beauty contests”—due to the potential lack of transparency of the latter, as a means of assigning new frequency licenses. They do acknowledge however, that the auction process can also be flawed, especially when it drives license bids so high that the winners are unable to afford to invest in rapid rollout of new services, which is of course a key criticism of many of the European UMTS auctions.

Similar tradeoffs and questions permeate nearly every aspect of major licensing decisions, and the handbook recognizes that there is no single, accepted “best” practice for many aspects of the licensing process. The final segment of this module suggests standard content—conditions, requirements, rules, etc.—that should be included in a typical PSTN operator’s license.

3. Module 3—interconnection

The most in-depth section of the handbook draws from McCarthy-Tétrault's extensive experience with interconnection issues and disputes. It is becoming common wisdom that fair and effective interconnection regulation is ultimately the key to successful competition policy, and hence market development. The topic has been the focus of reports, seminars, and conferences around the world, yet the intricacies of both the technical and economic features of interconnection are likely to continue to pose difficult challenges for most regulators for some time ahead. The handbook gives equal time to all sides of the issue, beginning with the basic principles underlying the need for strong interconnection regulation.

The authors place primary emphasis on negotiated, rather than mandated, interconnection agreements, which tends to be the preference in many countries. However, lawyers and all parties concerned should be aware of the practical impediments to fair and equal negotiations, especially in instances of newly introduced network competition, highlighting the regulator's role in creating incentives, mediating negotiations, and resolving disputes likely to arise.

Much of this module addresses the financial/economic considerations involved in establishing charges for interconnection, material that is reinforced in an appendix (see below). Unfortunately, although a variety of case examples are mentioned, we are not given any specific benchmarks for the range of network element costs found in the many studies and rulings that have been issued on this topic in recent years, particularly in North America and the E.U.

As for technical and operational aspects of interconnection, this module is especially valuable. It offers extensive discussion of the complex issues involved with network unbundling, including some welcome discussion and diagrams of alternative approaches. The tutorial value of this part of the handbook alone is worth the cover price.

4. Module 4—price regulation

The demands of price or tariff regulation have taken a back seat in recent years to some of the more pressing objectives of telecommunications regulators, such as issuing new licenses and promoting competition through interconnection and related policies. Indeed, as the handbook notes, in an ideally competitive market, there would be no need for price regulation, as market forces would theoretically determine fair prices. Many regulators have been forced to expend their limited expertise and resources towards establishing and promoting competition, rather than regulating incumbent operator prices, with the result that, especially in developing countries, in-depth experience with price regulation is rare. The handbook again provides a valuable introduction.

The authors predictably concentrate most of their attention on price cap regulation, the *de rigeur* methodology that purportedly simplifies the demands on regulators while improving incentives for efficient behavior. They do, however, at least present a more complete picture of the rationale and theory for price regulation, including consideration of the largely discredited practices of "discretionary" price setting and rate of return regulation. The problem with price cap regulation is similar to John F. Kennedy's description of democracy as a form of government: it's the worst system there is, except for all the other ones.

The handbook, while stating the case for price caps, helps illustrate their drawbacks through an exhaustive review of the complexities and requirements to implement an effective price cap system. These include, among others, the initial, or “going-in” price levels, definition of service baskets, price index formulae, inflation factors, the all-important productivity (X-factor), incentive and competition adjustments, exogenous factors, and quality of service adjustments. It is a good thing price caps simplify regulation!

The handbook also devotes some attention to the general issue of rate re-balancing, with the emphasis on experience reported by the OECD countries. Paradoxically, it notes that re-balancing is typically not achieved within a price cap system, but must be accomplished *before* price caps are introduced. The most interesting finding of this section involves the trend in many countries toward so-called “postalized” prices for domestic long distance calls, leading to the “death of distance”. Unfortunately, the book largely steers clear of the more volatile issues of *international* telephone service pricing, accounting rates, and the impact of Internet telephony.

5. Module 5—competition policy

This module should probably be located directly after the interconnection module, rather than separated by the monopoly-oriented chapter on price regulation. It also departs somewhat from the practical, methodological approach of the previous chapters to concentrate on policy issues, theory, and examples.

The module devotes a lot of attention to the potential abusive and anti-competitive activities of dominant, former monopoly telephone operators: restrictions on access to essential facilities, discriminatory pricing, cross-subsidy, price “squeezing” and predatory pricing. These practices are commonplace in newly open markets: all regulators and policy makers should be prepared to deal with them. Some of the remedies discussed include structural and accounting separation, and of course, pricing regulation.

The module also presents considerable background and examples regarding corporate mergers and acquisitions among telephone operators at the national and international scale. This is useful as part of the context of competition policy, although it is seldom within the direct purview of telecom regulators to rule on such actions.

6. Module 6—universal service

The last and longest section of the handbook—Universal Service—explains the distinction between the objectives for “universal service” and the more practical “universal access”, in the context of developing economies. There is a brief and welcome introductory discussion of the economics of universality—a very under-examined topic in this field—which asserts as a benchmark that worldwide, 2.5% of per-capita income is spent on telecommunications. The suggestion that costs above this level in a given area might justify external subsidy mechanisms is open to debate however.

Similarly, most of the other main topics in this module lend themselves to vigorous discussion each time they arise in a given country context. In essence, the question of universal access involves

the most fundamental issues of national social objectives, economics, and even international relations, and these can seldom be easily resolved by a simple formula or methodology. The two prevailing questions addressed in the handbook include the basic definition of universality (what to fund?), and the methods for implementing a universality policy (how to fund it?).

Concerning the definition of what types of access to fund, the report is essentially descriptive, rather than prescriptive, and this could be considered a missed opportunity. Until very recently, most access policies in developing countries have concentrated upon basic telephone services only, and the module's examples reflect this. A more forward-looking view that is emerging is to focus on broader types of service, particularly internet and e-mail access, as offering greater potential value to communities than "POTS". The examples in the handbook, do not really mention any of these newer approaches (such as have been introduced in South Africa, Hungary, and the Dominican Republic, among other countries), nor is there much focus on the role of multipurpose community tele-centres (MCTs) in fostering widespread access to advanced information technologies.

On the issue of funding methods to support universality, the authors emphasize that a combination of mechanisms, centered on market-oriented policies and incentives, have the best chance of bringing needed services to the most people. Financial mandates and obligations, such as service rollout requirements for licensed carriers, "access deficit charges" built into tariff and interconnection charges, as well as intentional cross-subsidies, are among the most common methods that have been employed around the world. However, these are viewed as secondary, and supplemental, to the process of market-based reforms such as privatization, competition, and cost-based pricing. Another mechanism, "universality funds", receives a more positive endorsement. The case studies from Chile, Peru, and several other countries, help illustrate the potential opportunities to expand communications access as part of a coordinated reform initiative.

Finally, the handbook also includes four helpful general appendices, which cover the WTO Reference Paper on regulation; the economics of telecommunications, a glossary of terms, (which would be greatly enhanced if it were accompanied by some simple diagrams of network components and service arrangements), and a reference list of source material.

Appendix B, on industry economics, is especially welcome. Often in the rush to implement conventional (or unconventional) regulatory practices, regulators seem to lose sight of the underlying economic principles that should be guiding these decisions. This is relevant both to direct price/tariff regulation questions, as well as for major issues of competition policy and universal service. The summary here is intelligent and reasonably complete, without being pedantic.

Although it is unclear if the Telecommunications Regulation Handbook itself will subsequently be updated, the book's introduction states that regulators have a "life cycle", which implies that at some point they might go into decline and die out. Although there are certainly those who favour the death of regulation, the scope and depth of regulatory responsibilities described in handbook suggest that its extinction is far from imminent.

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