

Freer Markets, More Rules: Confronting the Paradox of Telecommunications “Deregulation”

Hudson Janisch
March 15, 2006

My title is a tribute to a wonderful book by an American political scientist, Steven Vogel, entitled, *Freer Markets, More Rules: Regulatory Reform in Advanced Industrial Countries*. Published 10 years ago, it deals with a major paradox of our times—why as we move away from monopoly to competition do we see more and more regulation imposed, which all too often smothers the “invisible hand” and market forces that were expected to replace monopoly? This paradox is particularly noticeable in telecommunications. Why don't we just give competition a chance?

Vogel's insight has a particular resonance for me as I have had a long-term interest in telecom dating all the way back to the 1968 Bell Canada Rate Case. I long hoped that we could transit away from monopoly regulation to competition. In my time I have seen too much regulation, which has prevented at worst, and constrained at best, least cost service providers in the name of some undefined notion of the “public interest.”

In a most valuable recent article in *Telecommunications Policy* entitled “Good Intentions, Poor Outcomes: Telecommunications Reform in South Africa,” Alison Gillwald documents over and over again how far short regulation falls from its ambitious goals. Yet, her solution is not to seek to move away from regulation but to insist on even more regulation! As she puts it:

The strategies of *economic* regulation of telecommunications sectors have been instituted all over the world to deal with the imperfect market conditions that tend to exist in the early stages of market liberalisation, especially where there is a dominant incumbent. From a traditional market perspective, regulation has been viewed as a transitional phase until a country's telecommunications market becomes fully competitive and completely deregulated. However, experience from around the world suggests that the greater the activity in a telecommunications market, the greater the

demand for it to be regulated, particularly in mature markets where there are often tendencies towards concentration of ownership.

Given my transition aspirations, I find this a somewhat depressing scenario. I believe that there are signs that point the other way, *at least in mature markets*. Essentially, I suggest that it should now be possible to shift away from regulation focussed on network access for under-financed new entrant competitors to policing competition between well-financed facilities-based competitors. This will make it possible to move away, to at least some degree, from detailed *ex ante* regulation by a specialized sectoral regulator to *ex post* competition law implemented by a generalist competition authority.

I think it is important to keep in mind the changed quality of regulation in recent years. Of course, historically there was nothing simple or undemanding in rate of return regulation of a telecom monopoly. I recall all the time and effort that had to be put into determining the rate base and the appropriate level of return taking into account comparable earnings and with due regard for depreciation. I even recall how telephone poles were depreciated over 30 years, electro-mechanical switching equipment over 20 and the shock on realizing that new-fangled computers had to be depreciated in just one or two years! Yet for all its ponderous bulk, monopoly regulation was pretty strictly confined to financial matters and stayed well clear of widely respected management prerogatives. By contrast, regulated competition often leads to micromanagement by the regulator in which business practices are subject to intense scrutiny.

Whenever I think of “paradox” I immediately recall that glorious chorus in Gilbert and Sullivan’s *Pirates of Penzance*: “A paradox, a paradox, a most ingenious paradox.” (I remember it particularly well because I was involved in a production of the *Pirates of Penzance* when I was a student at Rhodes University in 1958. I should hasten to add that I did not have a singing role as I cannot carry a tune. I worked on the organizational and financial side of things and did a bit of humming.) Now, an “ingenious paradox” makes me think of lawyers. Has all the complexity of telecom regulation and its durability been an invention of avaricious lawyers? Remember

Jeremy Bentham's warning that the complexity of the law works in favour of the lawyers.

While I think that lawyers have much to answer for, I don't think that we can pin this rap on them. Underlying economic, technological and political drivers explain both why we had monopoly and why, even with the advent of competition, regulation of telecom has been so durable and so complex. At the same time, and most importantly, shifts in these drivers, especially disruptive technology, explain why regulation may at last be being undermined.

I am sure that the underlying economic principles are very familiar to you so I will touch on them only briefly.

First, network effects and interconnection—In most markets consumers do not care how many other consumers purchase the same products they buy. However, as a network industry, telecom is different in that the value of the network to *each* user increases with every addition of *other* users to the network. Hence, network effects. Non-interconnecting competing networks misallocate society's scarce resources away from their most productive use, that is to say it is wasteful. If this is so, why not have government order interconnection and we can then have economically efficient network competition. If dealing with network effects was as simple as decreeing that all competing carriers "must interconnect," telecom regulation would not be at all complex. In reality, there are many very difficult details in interconnection and strong economic incentives not to co-operate. (I vividly recall the harumph of Jean de Grandpré, the last of the old line Bell Canada CEOs: "It's a strange kind of competition in which *you* are going to get onto *my* network to compete with *me*." Not exactly an encouraging basis for co-operation!)

Among many difficult issues is how much, if anything, a large network should be allowed to charge for completing calls handed on to it by a smaller network? Moreover, there are many subtle and largely undetectable ways in which a large network operator can limit its interconnection capacity. It always amazed me how quickly all the transmission capacity in ducts was used up in Toronto the moment competitors arrived on the scene! Regulators often feel required to develop detailed

rules to govern the operational details of interconnection arrangements and penalize non-compliance.

Second—economies of scale and density. Network effects is concerned with the value of the firm's services to each customer. Economies of scale is concerned with decreasing per-customer cost of providing service. Closely related to economies of scale is economies of density. Consider an isolated large new condominium complex to which the fixed cost of running cable is R600,000. A single provider could spread the recovery of fixed costs over all 1,000 residents or R600 per customer. If 10 providers sign up 100 residents each, the cost per customer would be R6,000. As well, economies of density explains why telephone service is much more costly in rural than urban areas with the possibility of one cable per customer, rather than one serving many customers.

If economies of scale keep increasing (and are reinforced by network effects), then a single firm can serve the whole market with lower overall costs per customer than can multiple firms and the market is said to be a natural monopoly. Traditionally, telecom was considered to be a natural monopoly and governments granted monopoly franchises in exchange for commitments to provide a reasonable level of service at reasonable rates. Network effects were thereby circumvented because there was no need for competitors who would only dilute the incumbent's economies of scale. Even more important from a regulatory and political point of view, monopoly provided the means for cross-subsidies to achieve "universal service" such as those from business to residential, long distance to local and urban to rural. It must always be remembered that in the monopoly era only *total* revenues had to exceed *total* costs, individual services not being cost-justified. Of course, this house of cards came tumbling down with competition thereby seriously disrupting politically sensitive entitlements.

Monopoly often fell short of the promise used to justify it and, while perhaps appropriate for plain old telephone service (POTS), it was not suitable for a brave new world of pretty amazing new services (PANS). In any event, universal service had been largely achieved in countries with mature telecom industries and it soon became apparent that significantly higher rates of technological and marketing

innovation could be achieved with competition. As well, competition drives down prices thereby increasing penetration rates for new services and adding value to networks.

While there have been many positive developments, the economic principles identified earlier have cast a long shadow over the introduction of competition. It is true that interconnection will lower entry barriers because new entrants will not be required to build a ubiquitous network before competing with the dominant carrier, but the new entrant will not benefit from the economies of scale enjoyed by the incumbent with a large, well-established customer base. It must also be remembered that costs facing new entrant competitors are *fixed*, that is to say they must be incurred, and *sunk* (that is to say they cannot be put to some other use). Compare this with the *marginal* cost for the incumbent for each additional customer. Moreover, the incumbent's marginal costs may well decline as it is cheaper to serve the millionth customer than the thousandth.

Given network effects, economies of scale and high fixed and sunk costs, life is unlikely to be easy for new entrants. How should government respond?

- Should interconnection rates be kept artificially low?
- Should the dominant incumbent be handicapped by being required to cost-justify its prices to guard against predatory pricing?
- Should the dominant incumbent be subject, for example, to bundling, price floor and win-back restrictions?

The trick here is to balance the dangers of long-term contrived or artificial competition against the benefits of having at least some rivalry, even if it is far from "perfect" competition.

One of the greatest risks of too much regulatory intervention to counter the incumbent's inherent advantages is that it creates long-term dependence on regulatory support. Over the years, I have observed what I have dubbed "procreative responsibility" where regulators come to feel that they have some continuing responsibility for the success of the competitors they believe they have "created." This vanity causes them to judge the success of competition in quantitative, not

qualitative, terms. Rather than count heads, it would be better if regulators recognized the virtues of contestable markets in which there are no contrived entry barriers.

The pessimistic view of prospects for competition and the resultant need for extensive continuing regulatory intervention is largely predicated on the assumption that new entrants will seek to duplicate all or parts of the incumbent's network. Where there is a rapid and significant shift to new entry, barrier lowering technology such as to microwave, which made long distance competition possible, or to cellular wireless where competition has blossomed, there is much more room for optimism. The cost structure of old-fashioned electro-mechanical technology greatly reinforced monopoly; modern electronic technology undermines it. Today, we have voice over the Internet protocol (VoIP) which is a genuinely disruptive technology making competition possible in the last great bastion of monopoly, the local switched network. When the Canadian regulator, the CRTC, allowed competition in local a number of years ago it was a complete failure because the competitive local exchange carriers (CLECs) deployed much the same technology as the incumbent local exchange carriers (ILECs). But now, local competition is developing rapidly with the introduction of VoIP services by the cable companies, a very important development for us in Canada which I will develop more fully towards the end of this talk.

Now I turn to the political driver. For governments, telecom is seen as an important development enabler that must be carefully nurtured and encouraged. If, as it has been said, war is too important to be left to the generals, telecom is regarded as being too important to be left to the industry and its sectoral regulator. This leads to a "shared jurisdiction" between the ministry and the regulator with constant intervention and second guessing by the government with respect to regulatory issues. Sharing jurisdiction is very difficult at the best of times, impossible when those involved have different policy agendas. South Africa certainly has had experience of this with the Minister at one time concerned to protect the government's investment in Telkom and the regulator in liberalizing the market. The result was conflict and confusion. I am reminded when I think about shared jurisdiction in telecom of a truly perceptive Chinese saying about joint ventures: "One bed, two dreams."

I have recently been reviewing what is coming out of the World Summit on the Information Society. What is most striking is the extent of the recognition of how information and communication technologies (ICT) have changed everything and how ascendant private investment and independent and impartial regulation have become. Now it may be that I am merely seeing what I want to see so I invite you to take a look at the World Summit on the Information Society and assess for yourself the extent of the downgrading of politics and government in favour of impartial and independent regulation as essential in the creation of an enabling environment for information and communications technologies.

Briefly stated (and brief it must be if we are going to get to the discussion that I hope will follow this talk), in North America, the regulatory regime put in place to “create” competition has failed. It had always been vigorously opposed by the incumbents and in the United States the courts, in an instinctive recognition that discounted network access rates amounted to thinly disguised expropriation, kept cutting back on the FCC’s ambitions. In Canada, the courts have not been as active and the regime failed because the “children of regulation,” despite being given significant advantages early in life, never grew up to be successful competitors. Two major competitors emerged in long distance, one, Allstream, was descended from the old telegraph companies; the other, Call-Net was at one time affiliated with U.S. Sprint. Both experienced great financial difficulties and were in and out of bankruptcy reorganization as margins evaporated in long distance. Manitoba Telephone Systems recently acquired Allstream and its business customers and is now struggling to survive as a national player. Rogers Cable has taken over Call-Net and is integrating its extensive fibre optic network and residential customer base into that cable company’s well-financed drive to become a national telecom competitor.

There does not appear to be any need to mourn the passing of the managed, regulated competition model as new and far more self-sufficient competitors are emerging in an extraordinarily dynamic marketplace. IP-based technologies are fundamentally reshaping service providers and existing systems and operating procedures are being upgraded to capture new market opportunities while ever greater IP connectivity has fueled a rush to introduce new services. These include

IPTV, on-demand application and content services, enterprise security solutions, managed VoIP and the like. For me, confirmation of how far and how fast the telecom industry is moving came in the form of an inspiring keynote speech at the Pacific Telecom Conference this past January in Hawaii . Brad Garlinghouse, Vice President Communications Products at Yahoo! Inc. spoke on “The Portal View of Telephony and Messaging.” It was fascinating to watch the old-line telephone company executives hanging on his every word, simultaneously delighted at the prospect of a new and exciting use of technology while at the same time apprehensive as to what it all meant for their own companies.

I believe that the most ingenious paradox of freer markets and more rules may be confronted in telecom with a shift away from regulation focussed on network access for under-financed, new-entrant competitors to policing competition between well-financed, facilities-based competitors. That is why the eventual emergence of a second network operator (SNO) in South Africa is so critically important. I hope that it has not been delayed *too* long!

Very importantly, when the SNO gets under way, it will likely respond to a serious shortcoming in contemporary South African telecom: inadequate broadband access. It is expected that broadband services will be a key part of the SNO’s strategy with unlimited bandwidth a strong selling point. It appears that Telkom has kept broadband prices high in order to protect its substantial investment in its Integrated Services Digital Network (ISDN). Telkom recently lowered ADSL charges, no doubt anticipating competitive entry, but it seems that there is still plenty of room for the SNO. And, as a new entrant during a period of rapid technological change, the SNO has the advantage of no legacy network so it can build out a converged, next generation network (NGN) right from the start. Of course, it will be critically important for the SNO to outflank Telkom’s network and not to attempt to duplicate it. Incidentally, in Canada we have benefitted greatly from vibrant broadband access competition between telco ADSL and cable modem. I live in a small seaside community accessible only by ferry or float plane but I can choose from telco or cable broadband service, with satellite as a backup.

Canadian telecom regulation and policy are presently at a critical juncture. The CRTC has been a very active regulator under the *Telecommunications Act* of 1993. An extravagant version of the regulated conduct defence has meant that competition law has played little direct role up to now, although some competition law principles have been adopted by the regulator. The CRTC has allowed in competition by way of a series of regulatory forbearance decisions that will culminate in a local forbearance decision due out this month.

In a dramatic example of convergence, cable companies, whose lines run past virtually every home in Canada, are deploying VoIP to enter the general telecom market. Previously, the cable companies had been primarily broadcast programme distributors, although as we have seen, they did move into the broadband access market. Local markets have been opened to competition for eight years, but competition did not turn out to be feasible because duplication of copper networks made no economic sense. Now, however, VoIP technology has come of age and makes competition possible with well-established cable companies moving rapidly into local telephony as a bundling springboard from which to offer a full range of services including local and long distance telephone service, internet access, cellular mobile and, of course, cable television service. By the end of this year, 16% of residential cable subscribers, over two million in total, are likely to be using cable telephone service. The CRTC, in late 2005, using 2004 data, noted a 10-25% shift to competitors in 15 major centres, leading even Charles Dalfen, Chair of the CRTC, to cautiously conclude "I find this promising."

By 2005, Bell Canada, our largest incumbent, had lost all confidence in the direction being taken by regulation (and in the regulatory process as well) and turned to the political process. Bypassing both the CRTC and Ministry officials, Bell sought intervention directly from the Prime Minister's Office and in a surprise development a commitment to review telecom policy was included in the government's Budget Speech. In April 2005, the Minister of Industry appointed the Telecommunications Policy Review Panel, made up of Gerri Sinclair, an IT consultant, André Tremblay, a cellular wireless entrepreneur and Hank Intven, a leading telecom lawyer. The Review Panel's terms of reference were sufficiently broad and the calibre of its members sufficiently high to give an assurance of a genuine opportunity for a

thorough, in-depth reconsideration of telecom regulation as it had evolved in Canada. While this review process was getting underway the CRTC kept regulating, with results that confirmed Bell Canada's decision to "go political."

How the CRTC would deal with VoIP had been seen by Bell Canada and TELUS, Canada's second largest incumbent, as a yardstick against which to measure progress towards reducing regulation. In its May 2005 decision, the CRTC rejected the incumbents' argument that as VoIP service was entirely new there could be no dominant incumbents providing that service who needed to be regulated. Instead, the CRTC held that VoIP was simply a new technology for providing local service and thus should be subject to all the rules already in place.

Under asymmetrical handicapping regulation, when the incumbent local exchange carriers deploy VoIP they, unlike the cable companies, must cost justify their prices and are uniquely subject to bundling, price floor and win-back restrictions. In July 2005, Bell Canada and TELUS launched an appeal to the cabinet to have the CRTC decision reversed and attention reverted to the review process.

The Review Panel's approach provided for an extensive consultation paper and two rounds of written submissions as well as two opportunities for oral presentations. This occasion for a fundamental reconsideration of telecom regulation was taken up enthusiastically by all concerned—except for the CRTC—by way of extensive, high-level submissions. The central theme for the incumbents was the need to shift away from *ex ante* regulation to *ex post* competition law leaving only essentially technical issues with the regulator. The cable companies, as was to be expected, argued for the status quo, while Allstream desperately advocated market sharing by regulation.

It is now expected that the Panel's report will be made public next week. Whether it will recommend that Canada confront the paradox, recognize that cable entry into the general telecom market has changed everything, that regulated competition has not worked and that it is now time to move from regulation to competition law is the question of the hour. Should you be interested to learn the Review Panel's answer, its website may be found at <http://www.telecomreview.ca>.

So let me conclude. After more than 30 years of interest and involvement in telecommunications and its regulation, I remain enthralled by their constant change. As David Colville, the long-serving Vice Chair, Telecom at the CRTC, put it, “Trying to stay static is something none of us can do in this business. There will never be a state of rest—an end-point—for companies or for public policy.” To which I can only say Amen! and add a concurring legal realist perspective from Benjamin Cardozo: “Nothing is stable. Nothing absolute. All is fluid and changeable. There is an endless ‘becoming’.”

Postscript

The Review Panel, in its Final Report released on March 23, 2006, did indeed confront the paradox of freer markets and more rules, at least with respect to economic regulation. It recommended greater reliance on ex post competition law and extensive dismantling of ex ante regulation. In sharp contrast, the CRTC, in its April 6, 2006 decision on the “deregulation” of the retail local services exchange market, was very cautious in developing detailed rules to govern any move to the equalization of the regulation of incumbents and new entrant cable competitors. How will the new minority Conservative government in Canada reconcile the call for extensive deregulation from its independent panel of experts and continued regulatory caution on the part of the CRTC? Telecom regulation remains interesting, ever-changing and sometimes downright confusing in Canada as in South Africa!